

GOVERNMENT OF INDIA SOCIETY OF INTEGRATED COASTAL MANAGEMENT (SICOM) MINISTRY OF ENVIRONMENT & FORESTS

INTEGRATED COASTAL ZONE MANAGEMENT PROJECT COASTAL HAZARD LINE MAPPING PROJECT OF SURVEY OF INDIA. PROCUREMENT OF PROVISION OF GROUND CONTROLS AND DIGITAL PHOTOGRAMMETRY IN THE 7 KM BELT OF THE INDIAN MAINLAND COAST IN EIGHT BLOCKS [IFB NUMBER: PROC/SICOM/SOI/2011/01 DATED 19/10/2011]

Minutes of the Pre-bid meeting and Clarifications #1 to Queries Dated: November 11, 2011.

I. Minutes of the Pre-bid meeting held on 11th November 2011, in the Conference room of SICOM, Ministry of Environment and Forests, No. 9, Institutional Area, Lodhi Road, New Delhi - 110003 to clarify issues and to answer questions received from the prospective bidders till 04-11-2011.

1. The NCB Bid Document for Provision of Ground Controls and Digital Photogrammetry was published in the MoEF portal www.moef.nic.in on 21-10-11 and the corresponding IFB/Bid Notice was published in national News paper(The Hindustan Times) as well as in the MoEF portal www.moef.nic.in on 21-10-11.
2. As per clause 9.2 of the ITB the pre-bid conference was held in the Conference room of SICOM, Ministry of Environment and Forests, No. 9, Institutional Area, Lodhi Road, New Delhi – 110003, on 11-Nov-2011. at 10:00 hrs. Representatives from various firms participated in the pre-bid meeting.
3. The SOI ICZM Project Director initiated the discussions and gave a brief on the ICZM –Coastal Hazard Line Mapping project, its sub-components and the activities to be undertaken under the Project. He also highlighted the World Bank’s policy on Fraud and Corruption and emphasized that these should be adhered to by all stakeholders in the project. He informed that action would be taken against bidders found to have submitted Fake documents or false information as part of their bid. Prospective bidders were also requested to thoroughly check their bids for bid document fee, bid security, signatures, enclosures, documents, Qualification information, etc, before submitting.
4. Director, TNP & ANI GDC, SOI explained in detail the contents of the Bid Document, Scope of Work, the World Bank Procedure and Guidelines for Works for the Project.
5. The Bid Document was discussed in detail and the written queries raised by the prospective bidders till 04-Nov-2010 as well as further clarifications on these queries were discussed, deliberated and were clarified. The first set of such 72 queries with clarifications are summarized hereunder. The queries received during and after the pre-bidding meeting will be replied as clarifications # 2 subsequently and the same will be posted in MoEF website also.

6. The amendments/addenda to the bid document corresponding to the above clarifications #1 and #2, if any, will also be posted in MoEF website.

7. The bid document and amendments published in the MoEF website only should be referred to and downloaded for the purpose of submitting the bids. No other bid document/amendments published in any other website should be downloaded. No complaint will be entertained from any bidder in this regard.

8. There are further new queries raised by the participants (names not disclosed). Since these were not e-mailed to SICOM one week in advance as required under clause 9.2.3 of ITB, clarifications to these new queries will be published in the MoEF portal www.moef.nic.in, as mentioned above and also sent to the bidders who have purchased bid documents. This will also be given to the bidders who will be purchasing bid documents in future. Prospective bidders were also requested to intimate by email to senthil.vel@nic.in and proc.sicom@gmail.com, before 15 days prior to the deadline for submission of bids if any of their queries remain unanswered.

9. The pre-bid meeting concluded at 1330 Hrs.

10. The following participants attended the Pre-Bid meeting.

a. Representatives from SOI and SICOM.:

- Shri. M Dharma Raj, Addl. Surveyor General, SZ, & Project Director, ICZM SOI.
- Shri. R. K. Meena, Dy. Surveyor General, Survey(Air) & Delhi GDC, SOI.
- Shri. S. K. Sinha, Director, TNP & ANI GDC, SOI .
- Shri. D.N. Pathak, Superintending Surveyor, Surveyor General's Office, Dehradun, SOI.
- Smt. Bindu Manghat, Superintending Surveyor, Survey(Air) & Delhi GDC, SOI.
- Shri. I. S. Dahiya, Assistant Stores Officer, Survey(Air) & Delhi GDC, SOI.
- Shri. V. S. Krishnan, Procurement Officer, SICOM.
- Shri. B.K Gairola, SICOM.

b. Representatives of Prospective Bidders:

- Representatives from various firms participated in the pre-bid meeting.

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**II. Clarifications to Queries # 1 Dated: November 11, 2011,
given during the Pre-Bid Meeting on 11/11/2011 and thoroughly discussed with all the Participants/Prospective Bidders.**

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Query No.	Reference to Bid Document	Query	Clarification given by Bid Evaluation Committee
1	Clause 1.1 of Section 1(ITB) at page# 9	<p>The nature of work is composite requiring multidiscipline approach and logistics both in main land and inter tidal zone. (Refer para 1.1, page 9)</p> <p>a. Other components such as Precision Planimetric and height control, inundation modeling, shoreline analysis should also receive equal attention, if not more. For example, in zone -1, inter tidal zone 5349 sq.km between high water line and water shoreline represents 66% of the main land (8024 sq.km).</p> <p>b. To cover inter tidal zone, Photogrammetry experience alone cannot meet the requirement. It requires substantial ground input, logistics, Inter tidal / Island Survey and ground survey experts for Precision Planimetric / height control, inundation modeling, shoreline analysis etc.</p> <p>c. In fact, inter tidal zone is best done by the Inter tidal / Island Survey Department and Photogrammetry experience counts little. Moreover there is high tidal variation in the Rann of Kutchh, which is inaccessible during high tide and requires land and sea approach.</p> <p>e. Whereas, the entire focus is on Photogrammetry work, which is less than 50% of the work compared to the work involved for the other components as highlighted in</p>	<p>Since the 'Provision of Ground Control' component of work has been allowed to be sub-contracted in this Bid, the qualification requirement for this component of work has been catered separately in clause 4.5A(c) of ITB.</p> <p>It appears that the scope of work in the inter-tidal zone has not been understood properly. Pl. refer Clause 5.4.3.4 of Section 5 (Specifications) wherein the relaxed standards for Control Provision & AT have been spelt out. It is once again clarified that the survey of Inter-Tidal Zone shall include only the Photogrammetric Components (to the extent photography will be made available by the Engineer) and shall not include any ground survey.</p>

		<p>para 1.1, page 9.</p> <p><u>All Photogrammetry Projects involve Field Work for Control, and so it is inconsistent to exclude considering the Financial Criteria of the Field Work Portion since this is a very important part in a Photogrammetry Project.</u></p> <p>SICOM is requested to Consider Total Experience and Financial Eligibility of the <u>Total Work done by Vendor for a Single Mapping Project including both Photogrammetry and Field Work and not just Photogrammetry alone.</u></p>	<p>Suitable amendment to Section 1A clause 4.5A (b) i. and ii. of the bid document will be issued to include “Field Work”(GPS/Levelling) as part of “similar work” along with ‘Photogrammetry’.</p>
2	<p>Clause 4.3(j) of Section I (ITB) at page 10</p>	<p>Subcontracting the following components of work shall be allowed.</p> <ul style="list-style-type: none"> • Provision of Planimetric Control component of work • Provision of Height Control component of work. • Site Preparation <p>Sub-contracting the work implies that, Firms without requisite domain expertise can also participate in the bidding process based on their financial capabilities only and not on the technical expertise which is essential. In most Subcontracting the Credentials of the Subcontractor is not taken into account, whereas in this tender even credentials of Subcontractor are accounted for.</p> <p><u>At the same time, Para 4.4 stipulates that JVs are not</u></p>	<p>1)The Qualification Criteria for sub-contractors has been laid down at Clause 4.5A(c) & (d), hence the apprehension that Firms without domain expertise can participate is unfounded.</p> <p>2) The statement that in most tenders credentials of sub-contractor is not taken into account is not correct.</p> <p>Sub-contracting is always allowed for specialized components of work in</p>

		<p><u>permitted which contradicts sub-contracting being allowed.</u></p> <p>SICOM is to clarify why Subcontracting especially for Planimetric and Height Control is allowed when the purpose is almost the same as Joint Ventures which are not allowed.</p> <p>SICOM is requested to confirm that Credentials of Subcontractor especially for Planimetric and Height control <u>are not to be accounted</u> for in this bid.</p>	<p>Procurement of Work in NCB Tenders, as per the Project's Procurement Manual. The sub-contractor's experience and resources has been taken into account in determining the bidder's compliance with the qualifying criteria only to the extent spelt out in Clause 4.6 of Section I, which is as per the Project's Procurement Manual.</p> <p>3) Sub-Contracting for Planimetric & Height Control has been allowed after assessment of capacity of Industry.</p> <p>By allowing sub-contracting these companies can offer their services to any number of bidders and participate with many bidders, unlike a JV partner. 'One bid per bidder' clause is not applicable to sub-contractors but is applicable to Main Bidders & JV Partners. Thus, the reason for preferring Sub-Contracting to JV is to tap/optimally utilize the limited potential available in industry for GCP Control/ spirit leveling work, to the advantage of all bidders – thereby getting quality work and competitive</p>
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3	Section 2, Table 1.3.2 (page 29) and Table 1.33 (page 30)	<p>Upto 4 Subcontractors are allowed for GPS related work(Table 1.3.2) and Leveling Related Work (Table 1.3.3).</p> <p>The financial criteria is the combined for all the Subcontractors and the Main Contractor.</p> <p>In most projects, there is only <u>One Subcontractor allowed for a Particular portion of the work.</u> We do not understand how multiple Subcontractors can be allowed for the same portion of the work. Also it is unusual to combine all the Financials of the Subcontractors as one total Amount.</p> <p><u>SICOM is requested to allow only One Subcontractor each for the works detailed in SECTION 2, Table 1.3.2 and Table 1.3.3.</u></p>	Only 1(one) subcontractor each is allowed for GPS & leveling respectively as per clause 4.3(j). Tables 1.3.2 and 1.3.3 are being modified suitably
4a)	Clause 4.5 A (a) /Table 2 and 4.5 A (b)/Table 3 of Section I (ITB)(page 11,12)	<p><u>Financial Eligibility Criteria as per Table 2 and Table 3.</u></p> <p>This Financial Criteria of work is very large and there are very few domestic mapping projects of this scale. Most of the firms who have done this sort of work are doing this on Export/International Projects for Areas outside India where the terrain conditions are different compared to Indian conditions.</p> <p><u>Use of High Resolution Satellite Image (HRSI-Stereo) Photogrammetry should also be considered in addition to Aerial Photo Photogrammetry.</u></p>	Suitable amendment to Section 1A clause 4.5A a) and b). of the bid document will be issued to include “Satellite Photogrammetry” along with “Aerial Photogrammetry”.

		<p>In the recent projects, High Resolution Stereo Satellite Image (HRSI-Stereo) is becoming almost equivalent to Aerial Photos and the HRSI (Stereo) Mapping method is acceptable in other Indian Government agencies. <u>Eg: This HRSI (Stereo) Mapping method is approved and contained in the Guidelines and Technical Manuals of the National Land Records Modernization Program (NLRMP), Department of Land Resources, Ministry of Rural Development.</u></p> <p>SICOM is requested to kindly confirm whether Photogrammetry experience and Financial Criteria includes both Aerial Photos and/or High Resolution Stereo Satellite Images.</p>	
4b)	Clause 4.5(b)(ii) of Section I (ITB)	<p>Financial criteria laid down under para 4.4 (b) (ii) Table 3, page 11 is illogical. For example, for zone 5 & 6 respectively, the estimated cost of the project is Rs.25 million (Rs.2.5 crores each).</p> <p>Out of which, about 18m is required for non Photogrammetry Related work consisting of:</p> <p>GPS - Rs.5 Million</p> <p>Levelling - Rs.5 Million</p> <p>Inter tidal / Island survey for boats / ships, equipment, software etc. - Rs.5 Million</p> <p>Miscellaneous works- Rs.3 Million</p> <p>The balance available for Photogrammetry work is hardly</p>	<p>Financial criteria is as per the estimated cost and as per the Project's Procurement Manual.</p> <p>As already explained in answer to query # 1, the scope of work in Inter Tidal zone has been grossly misunderstood.</p> <p>Break-ups for components of work (GPS & Leveling, Inter-tidal/island survey) mentioned in the query are</p>

		Rs 7 million in zone 5 & 6 respectively. Whereas Rs.20 Million criteria has been laid down under Table 3 for Photogrammetry alone for Zone 5 and Zone 6 respectively.	projections in the query itself & not part of Bid Document– hence needs no clarification.
5	Clause 4.5A (c) of Section I (ITB), Page 12	<p>The bidder or his identified sub-contractors should have executed, in any one year, GNSS/GPS related survey works in relative static positioning mode / differential mode for an amount aggregating to at least Rs.5 (five) million, for each Zone.</p> <p>Most Survey Projects are on an all inclusive basis. There is no separate invoice or completion certificate only for the GPS portion of the work.</p> <p>SICOM is requested to kindly consider and issue amendment accordingly.</p>	<p>Though the work is composite on many occasions (may even include Aerial Photography) but the BoQ generally gives the break-ups of component of works. It is always possible to split the cost of work into components.</p> <p>Certificates to be produced accordingly for compliance with 4.5A(c&d). No amendments required.</p>
6	Clause 4.5A (d) of Section I (ITB), Page 12	<p>The bidder or his identified sub-contractors should have executed, in any one year, Spirit Leveling work for an amount aggregating to at least Rs.5 (five) million, for each Zone.</p> <p>Most Survey Projects are on an all inclusive basis. There is no separate invoice or completion certificate only for spirit leveling portion of the work.</p> <p>SICOM is requested to kindly consider and issue amendment accordingly.</p>	<p>Though the work is composite on many occasions (may even include Aerial Photography) but the BoQ gives the break-ups of component of works. It is always possible to split the cost of work into components.</p> <p>Certificates to be produced accordingly for compliance with 4.5A(c&d). No amendments required.</p>

7	Clause 1.1 of Section I(ITB)	<p>“Data management including daily incremental backup, monthly full backup of data as per the back-up plan submitted by the Contractor and approved by the Engineer.”</p> <p>We understand that the Data Management and Backup is limited to each Project site. There is no need for a Centralized Data Management and Backup to manage all the Project sites.</p> <p>SICOM has not given any technical specifications for the Data Management and Backup equipment. SICOM is requested to confirm that these specifications will be left to the Bidder.</p>	<p>Each Contractor will be responsible for backup and Data Management of the data pertaining to the Zones allotted to him, at his project site.</p> <p>The data management & Backup systems are part of critical equipments listed at 4.5B(a). General requirements for Preparation of site has been given at Section 5/5.1 & 5.4.1. The contractor has been given the flexibility to select appropriate equipments to optimize quality & cost and submit proposals accordingly, which will be evaluated for responsiveness of the bidder.</p> <p>Pl. refer Clause 4.3(k) of ITB, vide which bidder is required to submit proposed methodology and program of the works for all components of work including execution and management, backed with equipment and manpower planning and deployment, duly supported with broad calculations and quality control procedures proposed to</p>

			be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones – which will be evaluated for responsiveness of the bidder.
8	Clause 1.1 of Section I(ITB)	<p>Integration of important attribute information into the spatial database from the annotations of existing SoI maps</p> <p>i. Details of important attributes to be extracted are to be provided by SICOM. ii. SICOM to confirm that attributes need to be extracted only from SOI map provided by the Client and NO ground work is required.</p>	Attributes are to be extracted from annotations of SoI maps only. NO ground work is required.
9	Clause 7.1 of Section I(ITB), Page# 14	<p><u>Site Preparation</u></p> <p>Zones 1,2,3 and 4 are at the Same location—Survey of India Bangalore.</p> <p>SICOM is requested to confirm that each Vendor will have to prepare the site for the Zone/Zones that they are working on and each contractor will be provided a separate site.</p>	Yes, each Contractor will have to prepare site for work pertaining to Zone/Zones allotted to him. Each contractor will be provided a separate site within the secured premises of Survey of India at locations specified in the bid document.
10	Clause 4.5B(a) of Section I(ITB), Page# 12	Equipment and manpower resources as laid down under para 4.5(b), page 12 for Photogrammetry is much beyond the actual requirement. For Aerial Triangulation, 2 Nos. for	The equipments and manpower resources are as per the estimated duration of work to meet the timelines.

		<p>2 years is specified.</p> <p>Whereas the actual requirement per zone is 3 months maximum.</p> <p>Likewise, other equipment and manpower requirement is much beyond the actual need. Here again, no mention has been made regarding Inter tidal / Island survey capability, logistics, ground validation etc.</p> <p>If a Vendor is working on multiple Zones in the Same site, it seems unnecessary to insist on multiple licenses of the software that will only be used for a portion of the work for a short duration and not for the entire duration of the project.</p> <p>SICOM is requested to confirm that the vendor can use the same numbers of relevant software for multiple zones if the Site of work is the same.</p>	<p>The quantities refer to Minimum availability (either owned or leased or by procurement against mobilization advances) - for each Zone. Hence, The availability of these equipments have to be demonstrated at the time of bidding by furnishing information in Table 1.5 of Section II. For contract of multiple zones, aggregate Qualification Criteria is to be satisfied by the bidder.</p> <p>The deployment of resources has not been mentioned as 2 years in the bid document. It shall be synchronized with the program of works submitted by the bidder in compliance with Section I/Clause 4.3(k) and Execution Plan to be submitted by the Contractor vide Clause 27 of GCC (read with Clause 14 of SCC).</p>
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11	Section I / Clause4.5 B (b) Page#-12	<p>The Field Equipment and Field Survey Personnel, and Aerial Triangulation should be allowed to be deployed for more than one zone since the duration of the work is short for each zone.</p> <p>SICOM is requested to consider the same and issue appropriate amendment.</p>	<p>For multiple zones, the aggregate Qualification Criteria has to be satisfied. This is as per the Project's Procurement Manual. It cannot be diluted as it could lead to time over-run and compromise in the quality.</p>
12	Section I / Clause4.5 B (b) Page#-12	<p>1 expert each for Aerial Triangulation, DTM Generation, Feature Extraction and Orthophoto Generation.</p> <p>1 Team Leader each for Aerial Triangulation, DTM Generation, Feature Extraction and Orthophoto Generation.</p> <p>SICOM is requested to confirm if One Person can be deployed to do more than one task if they have the relevant experience in these tasks.</p> <p>SICOM is requested to kindly consider and issue amendment accordingly.</p>	<p>The qualification criteria shall not be relaxed.</p>
13	Clause 1.3.1, Section II, Page# 28	<p>1.3.1 Value of one similar work of value not less than Rs. 30 million* from photogrammetric related work (excluding field work) which necessarily includes aerial triangulation, DTM creation, contour generation, feature extraction in Stereo mode and ortho generation over the last five years (2006-07 to 2010-11)</p>	<p>Amendment to bid document is being issued to make Section 2, Clause 1.3.1 consistent with Section 1, clause 4.5A(b).</p>

		<p>OR</p> <p>Value of at least two similar works of value not less than Rs. 15 million* each from photogrammetric related work (excluding field work), in which case each of the work should include one or more components of work viz. AT and/or DTM generation and/or orthophoto generation and/or feature extraction in Stereo mode. However the two works taken together should necessarily include aerial triangulation, DTM creation, contour generation, feature extraction in Stereo mode and ortho generation over the last five years (2006-07 to 2010-11)</p> <p>*at 2011-2012 price level. Financial turnover and cost of completed works of previous years shall be given</p> <p>weightage of 5% per year from the year of completion based on rupee value to bring them to 2011-2012 price level.</p> <p>The financial criteria stated are in contradiction to what has been specified under Para 4.5 A (b), Section 1.</p> <p>SICOM is requested to clarify the purpose / intent of laying down Financial Criteria mentioned at Section 2, Para 1.3.1 .</p>	
14	Section 5/ Clause 5.5.51,Page# 78-85	<p><u>Accuracy Standards for Ground Control</u></p> <p>With all the stiff requirement for Photogrammetry for hilly / difficult areas, Total Station and GPS survey is proposed</p>	From the aspect of coastal hazard line, accuracy in plains is more important than in the hills. Hence relaxed standards have been adopted for

		<p>with 2.5m contour for hills (in other words, accuracy will be half the contour value that is 1.25m)</p> <p>SICOM is requested to kindly consider and issue amendment accordingly.</p> <p>For accurate shoreline data, we need to carryout tidal observations as per prescribed norms, which is not included in the scope of work. (Refer para 5.1, page 73)</p> <p>SICOM is requested to kindly consider and issue amendment accordingly.</p>	<p>provision of Height Control in hilly/difficult regions, where spirit leveling would be prohibitive in terms of cost. The decision has been consciously taken by competent authorities to optimize the cost, without defeating the project objectives.</p> <p>Shoreline Analysis is covered in detail in Clause 5.4.10 of Section 5 of bid-document.</p> <p>As per clause 17 of section 1 of bid document Alternative proposals by the bidders will not be accepted.</p>
15	Section 5/ Clause 5.2.1,Page# 73	<p>Heights of these Bench marks shall be provided by the Engineer only at the time of carrying out the leveling computations (Total Station / GPS leveling in Hilly/difficult areas) inside the secured premises of Survey of India.</p> <p>BM heights are required by the field party to facilitate them check the closing accuracy of the level line. They need these values to check and re-level, <i>if required</i>.</p> <p>SICOM is requested to consider and confirm that field party</p>	<p>The descriptions and approx. X,Y co-ordinates of BMs shall be provided to ground-control team which will be deputed from SOI for QC.</p> <p>Moreover, checking the permissibility of line-closure by different Computation/QA team at SoI premises shall also serve as independent quality check.</p> <p>Pl. refer para 4 of Clause</p>

		will be provided with BM heights & description.	5.4.3.3/Section 5, which spells out the drill that Computation Team is to synchronize to give the feed-back to the field-team – as required.
16	Section 5/ Clause 5.3.2,Page# 74	<p>Description & approximate co-ordinates of DT BMs & co-ordinates of Frame-work GPS controls (for field work) will be provided to the Contractor in batches as per the approved plan.</p> <p>This is in contradiction to Para 5.2.1, Page 73.</p> <p>SICOM is requested to clarify Para 5.3.2 with reference to Para 5.2.1</p>	<p>Description and approx. X,Y co-ordinates of BMs shall be provided to field-team <u>but</u> height shall only be provided in the secure premises of SoI to the computation team.</p> <p>Clauses 5.2.1 & 5.3.2 are not contradicting.</p>
17	Section 5/ Clause 5.4.2,Page# 74	<p>QA/QC Of Digital Aerial Photographs, GCPs etc provided by the Engineer</p> <p>SICOM is requested to confirm that all required raw data will be provided so that quality checking can be carried out by Contractor.</p> <p>SICOM is requested to provide flight plan/ Photo Index (or photo exposure coordinates), on appropriate scale.</p>	Pl. refer Section 5/ Clause 5.2.1 regarding the input materials that will be made available to the Contractor, which includes supply of Photo-index amongst others.
18	Section 5/ Clause	Relaxed standards will be used for Aerial Triangulation of	Pl. read the clause 5.4.3.4 completely.

	5.4.3.4,Page# 76	<p>such areas.</p> <p>SICOM is requested to specify the relaxed standards for adoption.</p>	<p>The relaxed standards including Integrated Sensor Orientation and cantilevering are spelt out in the same clause.</p>
19	Section 5/ Clause 5.4.4.3,Page# 77	<p>DEM in .IMG and ASCII shall also be prepared as per the extent of 1:10 K sheet.</p> <p>SICOM is requested to confirm that the Layout of Sheets and Sheet Numbering, to be adopted will be provided.</p>	<p>Suitable amendment is being issued to change the tile limit from that of 1:10K sheets to “width of coastal belt X 5 km along the coast” with 1: 10K sheet limits(3’ X 3’) superimposed as polygons.</p> <p>Pl. refer Section 5/ clause 5.4.10, wherein it is stipulated that lay-out of sheets shall be prepared by the Contractor and got approved by the Engineer. However, guidelines regarding numbering system and layout shall be provided by Engineer.</p>
20	Section 5/ Clause 5.4.4.10,Page# 78	<p>Digital map as per the approved content and layout on 1:10,000 scale on WGS 84 datum and UTM Projection shall be prepared by the Contractor.</p>	<p>Suitable amendment is being issued to change the tile limit from that of 1:10K sheets to “width of coastal belt X 5 km along the coast” with 1: 10K sheet limits(3’ X 3’) superimposed as</p>

		<p>SICOM is requested to confirm that Sample Map showing approved content and layout on 1: 10000 scale will be provided.</p>	<p>polygons.</p> <p>Pl. refer Section 5/ clause 5.4.10, wherein it is stipulated that lay-out of sheets shall be prepared by the Contractor and got approved by the Engineer. However, guidelines regarding numbering system and layout shall be provided to the successful bidder by Engineer.</p> <p>Please refer Section 5/Clause 5.5.3 according to which Implementation level Data Model Structure will be provided by Engineer.</p>
21	<p>Section 5/ Clause 5.5.1.1 Page# 78</p>	<p>Forty to Fifty additional plan & height control should be provided at well-identified locations inside the block.</p> <p>SICOM is requested to confirm that additional plan & height control together should be forty to fifty only per block.</p>	<p>Pl. read Section 5, Clause 5.5.1.1 in its entirety. additional points are over and above the vertical controls to be provided at every fourth model (in the inner strips), plan& height control at every fifth model along perimeter of blocks.</p> <p>It is confirmed that only 40-50 additional plan & height points are required over and above the other requirements spelt out in Section 5/Clause 5.5.1.1</p>

22	Section 5/ Clause 5.5.2.3 Page# 86	<p>DTM grid spacing : 5 metre (10 m in hills)</p> <p>Spacing of mass points at 2 m intervals in plains has been specified under Para 5.4.4.3 (b), Page 76.</p> <p>SICOM is requested to confirm the correct spacing.</p>	<p>DTM grid spacing : 5 metre (10 m in hills) is correct.</p> <p>Suitable amendment is being issued separately to make clause 5.4.4.3(b), Page 76, consistent with 5.5.2.3.</p>
23	Section 5/ Clause 5.8.2, Page# 91	<p>QA Plan for Digital Photogrammetry – Work done by out-sourcing.</p> <p>Para 4.3 (j), Page-10, states that</p> <p>“However, sub-contracting the Photogrammetric component of work is not allowed”.</p> <p>Hence term “work done by outsourcing” may please be elucidated.</p>	<p>‘Out-sourcing’ here refers to the out-sourcing by Employer and not the Contractor.</p> <p>Suitable amendment is being issued separately to delete ‘Work done by outsourcing’, in order to remove any ambiguity.</p>
24	Refer Table 1 of IFB at Page#5&6	<p>The project areas are mentioned as HTL (mainland) and Inter Tidal Zone.</p> <p>Ex. Zone 1 HTL: 8024 sq. km and Inter Tidal Zone: 5349 sq. km.</p> <p>Can you please confirm whether inter tidal zone is a part of HTL (mainland) area, or is it a separate area?</p>	<p>Inter Tidal Zone of 5349 sq. km is a separate area of 5349 sq. km between HWL & LWL . It is not part of 8024 sq. km of mainland area (ie. Above HTL).</p>
25	Table 1 of IFB (Page #5&6) and section 6	<p>HTL project areas are mentioned based on approximately 7 km. wide coastal belt of Indian mainland (HTL). Also, in</p>	<p>The coastline length corresponds to the length of the arc winding up and down along the indented coastline, and is not</p>

	Drawings (Page #96)	<p>section 6, the linear length of each zone has been indicated.</p> <p>We see that there is a difference between project areas mentioned in Table 1 and linear km mentioned in the drawing. In this connection, we would like to know how these areas are derived.</p>	<p>linear-km.</p> <p>They have been extracted from 1:50K topographical maps .Areas exclude water area.</p>
26	Clause 4.5A(c) and 4.5A(d) , Section 5(page#12)	<p>Bidder's qualification is set to Rs. Five million for GNSS/GPS and Spirit Leveling work for each zone respectively.</p> <p>We request Engineer to revise this qualification to cover all the zones within this amount instead of each zone.</p>	<p>Amendment is being issued to relax the qualification criteria for</p> <ul style="list-style-type: none"> • GNSS/GPS work to 3(three) million and • Spirit Leveling and/or Total Station work to 2(two) million.
27	Clause 4.5A(c) and 4.5A(d) , Section 5(page#12)	<p>We feel that some of the sub-contractors may be willing to work with multiple contractors concurrently. We would like to know if this is allowed, or a sub-contractor is restricted to working with only one contractor.</p>	<p>Yes, sub-contractors can work with multiple Contractors, provided they meet the aggregate Qualification Criteria. Please refer Section 1/Clause 5.1 & 4.5C in this regard.</p>
28	Clause 5.2.3 of Section 5 (page#73)	<p>Engineer will supply pan sharpened aerial imagery (Pan, R, G, B, NIR bands - 9 cm GSD) captured with Large format Frame Digital Aerial Camera (DMC).</p> <p>a) Aerial images will be flown using ABGPS?</p> <p>b) Is the onboard ABGPS system supplemented with</p>	<p>a) Yes</p> <p>b) The on-board ABGPS is supplemented with Applanix POS-AV system .</p>

		<p>Applanix POS-AV or similar system to improve the accuracy of ABGPS parameters?</p> <p>c) What is the % of forward and lateral overlap of the images? Is it standard 60 / 30?</p> <p>d) We assume that Engineer will supply a single set of pan sharpened aerial imagery for both HTL and Inter Tidal zones captured during Low Tides. Please confirm.</p>	<p>c) 60% ± 5%: (fore and aft overlap). 25% ± 5%: (lateral overlap).</p> <p>d) Yes</p>
29	Clause 5.4.9,Section 5, Inundation Modeling (page #77)	<p>Inundation Modeling</p> <p>It is mentioned that the contractor needs to predict flood level of 100 years return period of primary and secondary ports.</p> <p>a) Please let us know whether inundation modeling is required only at the primary and secondary port areas, or is it required for all along the coast?</p> <p>b) Will Engineer supply us the coast-line data and historic port data for every 30 km to perform this activity?</p> <p>c) If above answer is yes, please let us know currency of the data that is going to be provided.</p>	<p>The inference is wrong. The predicted flood level of 100 years return period of Primary and Secondary Ports, will be provided by the Engineer all along the coast-line, as available. The inundation modeling is required to be done all along the coast.</p> <p>The Flood Level (with return period 100 years) between the nearest ports is to be interpolated by the contractor at regular transects of (say 250m), which is further to be used for inundation modeling along the coast. The coast line will be mapped from the deliverable ortho image.</p>

30	<p>Clause 5.4.9,Section 5 (page #77)</p>	<p>Inundation Modeling</p> <p>We anticipate that the meteorological data such as legacy tidal information, precipitation, floods etc. is also require to perform the Inundation Modeling.</p> <p>a) Please let us know whether Engineer will supply this data, or is the contractor required to acquire this?</p> <p>b) How many years of meteorological data need to be used and analyzed to predict the flood level?</p>	<p>a)The 100 years return period flood level data (processed from historic tidal data collected by G&RB , Survey of India)will be supplied by the Engineer to the Contractor, in r/o primary & secondary ports (@ 30-40 km apart) – as has also been mentioned in Section 5/Clause 5.4.9.</p> <p>b) Prediction of flood level with 100 years return period is not to be done by Contractor. He is only required to interpolate the flood-levels at regular transects, with the help of data supplied to him for primary/secondary ports & use it for Inundation Modelling.</p> <p>Alternatives are not acceptable.</p>
31	<p>Project Areas and Inputs</p> <p>(Table 1 of IFB, Page#5)</p>	<p>Can you please provide the following digital data for all the 8 zones:</p> <p>a) HTL (mainland) boundaries</p> <p>b) Inter Tidal Regions</p> <p>c) Island extents</p> <p>d) Zone extents</p>	<p>These will be provided to the successful bidder(s). However, bidders may use data such as Bhuvan & Google Earth images for planning and bidding. This will be applicable to all bidders.</p>

32	Clause 5.2.6, Section 5 (page #73)	Please provide photo index to plan and estimate the number of GCPs required for each zone.	<p>The camera being used for Aerial Photography for all the Zones Zones I, II, III, IV, V, VI, VII and VIII is DMC I and the gsd is 9 cm.</p> <p>This information may be used by all bidders for planning and bidding. However, the photo index will be provided to the successful bidder(s).</p> <p>Suitable amendment shall be issued separately giving further details of camera and digital imagery.</p>
33	Clause 1.9, Section 3F (Special Conditions of Contract),page #59	<p>It is mentioned that the production site for digital photogrammetry work is mentioned in Table 1 of IFB. However, the Engineer, referred in the bid document, reserves the right to change the location of production sites to any other Survey of India premises.</p> <p>We would like to mention that if there any changes in the production sites, they may have commercial implications on our proposal. We request Engineer to stick to the production sites mentioned in Table 1 of IFB.</p>	<p>Location of production sites may be changed, if necessary, after the award of the contract, in consultation with the contractor(s).</p> <p>The bidders may submit their bids based on the location of present sites proposed at Hyderabad and Bangalore.</p>
34	TABLE 1 of IFB (page #5)	Can the SOI facilities in Bangalore and Hyderabad be used for 24 hours operation by the contractor on all the 365 days?	Yes.

35	Clause 5.4.10, Section 5 (page#77)	It is mentioned that two old vintages of aerial/satellite imagery on scale 1:25K/1:40K/1:50K will be supplied by Engineer for carrying out the shoreline analysis. Which vintage is being decided for the supply and which sensor (is it aerial or satellite imagery).	<p>1)One set of photographs from 1990-95 vintage.</p> <p>2)The second set from 1970-80 vintage.</p> <p>For gap areas, the 1:50K topo maps shall be provided and the payment pertaining to item 10 of BoQs (related to extraction of shoreline from vintage photographs) shall be reduced accordingly.</p>
36	Clause 5.4.10, Section 5 (page#77)	What is the projected frequency that you expect for depicting the erosion line over the period of 100 years?	<p>Question is not clear.</p> <p>Frequency is for Flood Level not for the erosion rate. Pl. refer the clause 5.4.10 for details.</p> <p>Erosion line has to be extrapolated from the analysis of erosion-rates from 3 time series of coast-lines.</p>
37	Clause 5.4.10, Section 5 (page#77)	Do you have any models derived till now for any of the coastal zones on flood mapping and shore line analysis? If available, can you please share a few sample models?	You may refer the Digital Shoreline Analysis system (DSAS) model of USGS.
38	Clauses 5.4.9 & 5.4.10 of Section 5 (page#77)	Does Engineer have any reservations on any specific software for performing the flood modeling and shore line analysis, or can the contractor choose the best software?	The Contractor may choose the best soft-ware. However, the details of the software have to be furnished in

		Also, please let us know if this has any bearing on the technical rating that you give.	<p>compliance with Section 1/ 4.3(k), which will be evaluated for responsiveness.</p> <p>Suitable amendment is being issued incorporating a stage/Go-ahead approval for Inundation Modeling & Digital Shoreline Analysis ,at the completion of 1st Block by the Contractor.</p>
39	<p>Clause 5.1, Section 5, Page# 73</p> <p>Clause 5.4.8, Section 5, Page#77</p>	We assume that the features extracted in stereo mode as per the data model structure (DMS) do not require any ground truthing including attribute collection. Please confirm.	<p>No ground-truthing is required. However, pl. refer Clause 5.8.3.2 of Section 5, vide which Engineer may carry out sample examination of the deliverables on ground.</p> <p>However, as per section 5.5.3, <i>the administrative boundaries i.e. State, District & other boundaries and Annotations etc are to be transferred from existing maps / data supplied by the Engineer.</i></p>
40	Clause 5.4.2 of Section 5, (page#74)	What kind of pre-pointed targets (permanent monuments, temporary paint marks or reflective material with shapes such as x, +, y, v, etc.) are used? Please provide us the number of target placed for each zone.	Permanent structures or semi-permanent concrete pads with paint marks. Temporary reflective targets may also be used if required. Pre-pointed points shall be @ 50km along the coast, on the beach-side only.

41	Clause 5.4.3 of Section 5, Page 75	Will the Engineer supply the locations of BMs and pre-pointed control locations to vendors for plan and estimation of GPS controls?	<p>BMs are available at every 2 to 3 km interval on both the sides of the 7 km(approx) coastal zone, except in Marshy areas, High Hills and water bodies.</p> <p>Pre-pointed controls are available at every 50 km interval. The bidders may use this information for bidding.</p> <p>However, the data requested will be given to the contractor, for commencement of work.</p>
42	Refer 5.4.4.1 (b) of Section 5 at page# 76	Interior orientation does not require digital aerial photographs acquired using DMC. Please confirm.	<p>Confirmed. No fiducial marks need to be measured. However, the definition of sensor geometry needs to be defined. This has been referred as IO.</p> <p>Please refer Section 5/ Clause 5.5.2.1 for further details.</p>
43	<p>Clause 5.4.4.3(h) of Section 5 at page# 77,</p> <p>5.4.6 (a) of Section 5 at page# 77,</p> <p>5.4.10 of Section 5 at page# 78</p>	DTM, contours, ortho and other features are required to be delivered in 1:10 K sheet wise. Can you please provide the number of 1:10K map sheets covered per zone?	<p>Amendment is being issued to change the tile limit from that of 1:10K sheets to “width of coastal belt X 5 km along the coast” with 1: 10K sheet limits(3’ X 3’) superimposed as polygons.</p> <p>Amendment shall be issued separately to change ‘5.4.10 Preparation of output</p>

			data as per Layout' to '5.4.12 Preparation of output data as per Layout'
44	Clause 5.5.1.1 Density and Distribution of Section 5 , Page# 78	Is it mandatory to collect plan and height control points along the perimeter of the block at every 5th model? The reason is that stereo models there will be limited and there may be no possibility to collect GPS controls (post points) towards sea water at the shoreline.	<p>Yes, it will be mandatory. The photographs will be latest and of very high resolution and hence post-pointing shall not be difficult. The post-pointed location can always be shifted to 4th or 6th model.</p> <p>In case there is no possibility to collect post-points, it will be processed with Inter-tidal zone methodology ie. Cantilevered to the main block.</p>
45	Clause 5.5.2.5 of Section 5, Page# 86	Is the ortho imagery required in 4 bands (R, G, B and NIR) or is it to be delivered as RGB (natural color) and CIR (Color Infrared) with 3 bands each?	Ortho-imagery is required to be delivered in pan-sharpened RGBI (4 bands)
46	Clause 5.6(d), of Section 5, Page# 89	What is the compression ratio for seamless ortho mosaics in .ecw format?	1:20. However, this shall be confirmed by the Engineer during actual execution, after inspection of actual data of the first Photogrammetric Block.
47	Clause 5.4.4.1(h) of Section 5, Page# 76	Who is responsible for edge matching between the zones which include but not limited to GPS control, edge stereo models transfer/tie, DTM/DEM, ortho images, features (vector data), inundation models, shoreline, etc. Is this process being taken care of by the Engineer?	<p>Each Contractor will be responsible for its Southern Edge. In case of Zone 5 & Zone 4, the west edge of Zone 5 shall be adjusted by Contractor of Zone 4.</p> <p>Suitable amendment will be issued in this regard.</p>

48	Table – 1 / Column 4 of IFB, Page# 5	<p><u>Bid Security (EMD)</u></p> <p>If bidding for all 8 blocks, do we need to submit the EMD for each block separately OR collectively in one BG for all blocks?</p>	Separately for each zone as stipulated in Clause 16.1 of Section 1 (ITB).
49	Table – 1 / Column 4 of IFB, Page# 5	<p><u>Provision of Ground Controls and Digital Photogrammetric Work of approximately 7 km. wide</u></p> <p>Area above HTL (mainland): 8024 sq km Area in Inter Tidal Zone : 5349 sq km Area of islands : 67 sq km Area above HTL (mainland): 9065 sq km Area in Inter Tidal Zone : 3408 sq km Area of islands :293 sq km We presumed that establishment of GCP will be limited to Area above HTL (mainland) only</p>	Yes, provision of GCP will be limited to area above HTL.
50	Clause F 2 of Section 3 (SCC) (Page# 59 of 120)	<p><u>Special Conditions of Contract</u></p> <p>The sub-clause B 27.1 of Conditions of Contract, Program shall include Plan for all key activities like....</p> <p>Training of SOI staff for 1 month in the software, systems and processes being used by the contractor.</p> <p>Whether the scope also include supply of Photogrammetric software at the end of the project</p>	<p>No, scope of work does not include supply of Photogrammetric software at the end of the Project.</p> <p>Training is to be conducted by the successful bidders of each of the eight Zones to a batch of 20(twenty) trainees each. The venue of training shall be at Indian Institute of Survey & Mapping, Hyderabad(including for Zones allotted to the Bangalore Production site.) , as Hostel facilities are available</p>

			<p>at IISM,Hyderabad. Training material in soft and hard copies as well as SOPs for all practical exercises for components of work such as AT, DEM creation & editing, stereo-feature extraction, ortho-photo generation, Inundation modeling, digital shoreline analysis etc will have to be provided by the contractor to each of the 20 trainees . 3(three) additional copies of Training Materials & SoPs shall also be provided.</p> <p>Also, training for Data Management shall be provided by the Contractor to a batch of 5(five) SoI officers for 1(one) week in respect of systems to be used by them. The training of this sub-component shall be conducted on-site after completion of site-preparation.</p> <p>Suitable amendment will be issued giving details. The period of 1st milestone shall be increased from 1 month to 6(six) months. It shall include imparting of training in addition to site preparation.</p>
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51	<p>Clause 5.4.1 of Section 5 (Page# 74 of 120)</p>	<p><u>5.4 SCOPE OF WORKS IN DETAIL</u> Site Preparation</p> <p>We assume that basic infrastructure with water and electricity will be provided by SOI, however respective vendors will be responsible for electric networking required furniture and necessary hardware and software for the assignment. We also assume that the basic infrastructure will be free of cost including electricity and water.</p>	<p>Electricity and tap water shall be provided free of cost. However, Generator sets, Drinking water etc. will have to be arranged by the contractor himself.</p>
52	<p>Clause 5.2.2 of Section 5 Page#: 73 of 120</p>	<p><u>5.2.2 Planimetric Ground Control points @ 10 km to 50 km apart</u></p> <p>a) Could you please provide the input Ground Control point's counts and distribution diagram?</p> <p>b) Please specify the accuracy of these Ground Control points.</p>	<p>(a)Pl. refer Clause 5.2.1 & 5.2.2 of Section 5 regarding density and distribution.</p> <p>Diagram will be provided after award of Contract.</p> <p>(b) The planimetric points have accuracy better than 2 cm, while the vertical control points have been provided by DT/ST spirit leveling & have been adjusted to the Precision BMs of SoI. Their accuracy is better than 5 cm.</p>
53	<p>Clause 5.2.3 of Section 5 Page#: 73 of 120</p>	<p><u>5.2.3 Aerial Imagery</u></p> <p>a) We assume that the raw and compressed aerial imagery (photos) of all the Project areas will be provided. Please confirm.</p>	<p>a) Aerial Imagery (Pan-sharpened, R, G, B, NIR bands - 9 cm GSD) with forward and lateral overlaps in TIFF format - captured with Large format Frame Digital Aerial Camera</p>

		b) Could you please provide the count of the aerial photos available for each Zone separately?	(DMC) of approximately 9 cm GSD (PAN) will be provided b) No. of photos can be calculated with details being furnished.: <ul style="list-style-type: none"> • DMC I Camera has 7680 pixels along track & 13824 pixels across track. GSD = 9 cm and 60/25 overlap. • Size of model is approx 0.25 sq km. Suitable amendment shall be issued separately giving further details of camera and digital imagery.
54	Clause 5.2.3 of Section 5 Page#: 73 of 120	<u>5.2.3 Aerial Imagery</u> It has been stated that the Aerial Imagery will also be provided in Hardcopy – we presume these are ‘contact prints’ of the complete project area, and will be provided as reference material only. Please confirm.	Hard copy is for reference/planning. Hard-copies will provided in the secure premises of SoI , only on specific request. If used for provision of post-pointed GCPs, they will be under the custody of SoI official.
55	Clause 5.2.5 of Section 5 Page#: 73 of 120	<u>5.2.5 Preliminary ortho-photos (frame-wise) as available</u> a) Could you please indicate which frame-wise Ortho photos are available (Zone-wise), and how many? b) Are these in compressed GeoTiff format?	a) Preliminary-ortho will be available for all the frames, as a deliverable of Digital Photography Tender. b) They will be in geo-tiff format.

56	<p>Clause 5.2.8 of Section 5</p> <p>Page#: 74 of 120</p>	<p><u>5.2.8 Maps/proofs of the area on 1:50,000 scale or 1:25,000 scale (as available)</u></p> <p>Could you please indicate the Contents of these Maps, data formats, and how many such maps are available?</p>	<p>These are maps/proofs of standard 1:50K/25K topographic sheets of Survey of India.</p> <p>1:50 K topographical data can be provided in the secured premises of SOI in .dgn/.mdb of Intergraph, Pdf format /scanned copy of paper maps.</p> <p>.DGN/Scanned raster data (.tiff format) of 1:25K maps/proofs will be provided in the secured premises of SOI, as per availability.</p>
57	<p>Clause 5.2.9 of Section 5</p> <p>Page#: 74 of 120</p>	<p><u>5.2.9 100 year return period flood level along the coastline @ every 30 km (approx)</u></p> <p>Could you please indicate the format of the 100 year flood level data which will be supplied to the Vendor?</p>	<p>.doc format</p>
58	<p>-----do-----</p>	<p>-----do-----</p>	<p>(Query Repeated)</p>
59	<p>Clause 5.4.4.3(b)</p> <p>Page#: 76 of 120</p>	<p><u>5.4.4.3 DTM Generation And Editing</u></p> <p>Is any information on the extent (sq.km) of delineation of plain and hilly terrain available?</p>	<p>You may refer freely available materials from sources like Google, Bhuvan, SRTM.</p>
60	<p>Clause 5.4.6 of Section 5</p>	<p><u>5.4.6 Generation of Contours</u></p>	<p>No index shall be provided by</p>

	Page#: 77 of 120	<p>a) Point 'A' states "Contours will be automatically generated at 0.5m V.I. for plains and 2.5m V.I for hills". We presume that the Employer will supply the index demarcating the distribution of the 0.5m and 2.5m interval Contour tiles at 1:10K scale. Please confirm.</p> <p>b) In conjunction to the above point, are the counts of such 0.5m and 2.5m tiles available?</p>	<p>Engineer. It is to be prepared by the Contractor and got approved by Engineer on case to case basis.</p> <p>As a guide-line Terrain above 20 m may be treated as hills. These can also be derived by the contractor from the SOI maps provided to him in the production site.</p>
61	<p>Clause 5.5.2.3(b) and Clause 5.4.4.3(b) of Section 5</p> <p>Page#: 76 & 86</p>	<p><u>5.5.2.3 DTM Generation and Editing</u></p> <p>a) In the tender Section 5.5.2.3 (page 86) we see that "DTM grid spacing: 5 metre (10 m in hills)" whereas in section 5.4.4.3 (page 76) DTM Generation and Editing 'b' part it shows 2m interval for plains.</p> <p>b) We presume that it should be 5m for Plain areas and 10m interval for Hilly areas. Please confirm.</p>	<p>(a)DTM grid spacing : 5 metre (10 m in hills) is correct.</p> <p>Amendment is being issued separately to make clause 5.4.4.3(b), Page 76, consistent with 5.5.2.3.</p>
62	<p>Clause 5.5.2.5 of Section 5</p> <p>Page#: 87 of 120</p>	<p><u>5.5.2.5 Ortho-Photo Creation</u></p> <p>The Tender mentions "2.5m positional accuracy at the 95% confidence level". Please confirm this accuracy statement.</p>	<p>The planimetric accuracy of the control points/check points AT/Block adjustment is laid down in Clause 5.5.2.1, Section 5.</p> <p>Since true-ortho is not to be generated in this project, the planimetric accuracy shall be specified for feature-</p>

			<p>extraction in stereo-mode only.</p> <p>Amendment shall be issued separately to (i) specify the planimetric accuracy for Feature Extraction in stereo-mode as 25 cm rmse.</p> <p>(ii) delete the planimetric-accuracy requirement of 2.5m, as specified in the bid-document for ortho-photo.</p>
63	<p>Clause 5.5.2.3 of Section 5</p> <p>Page#: 86 of 120</p>	<p><u>5.5.2.3 DTM Generation and Editing (DTM height accuracy)</u></p> <p>The accuracies stated for the DTM data are 25cm with 90% confidence level. This may not be possible for non-Plain areas especially considering the accuracies stated in the tender for hilly areas, which is +/-50cm. Please clarify the accuracy requirements for different types of terrain.</p>	<p>Amendment is being issued separately for relaxing the DTM accuracy in hilly areas to 1.25m.</p>
64	<p>Clause 5.4.7 of Section 5, Page# 77</p> <p>Page#: 86 of 120</p>	<p><u>5.5.2.5 Ortho-Photo Creation</u></p> <p>Ortho-image format: GeoTIFF with the specified geo-keys and tags included. We presume that overviews/pyramids are required also for the deliverable tiles?</p>	<p>Yes</p>
65	<p>Clause 5.1 of Section 5</p> <p>Page#: 73 of 120</p>	<p><u>Scope of Work (Project area)</u></p> <p>We request to receive the Project area boundaries in Shape file format or KMZ format for all the Zones.</p>	<p>This will be provided after the award of contract. Pl. refer the area and definition of Zones in IFB and Section</p>

			6.
66	Clause 5.8.3.2 of Section 5	<u>Data Approval by Engineer</u> Please define the duration in work days, for providing the approvals on the respective deliverable items as defined in the scope of work.	Pl. refer Clause 5.8.3.2 of Section 5.
67	Clause 5.3.1 of Section 5, Page#: 74 of 120	<u>5.3.1 Spatial Coverage of Input</u> a) We presume that the 'no-fly' zones are near the western and eastern border areas only. Could you please provide the approximate area in sq.km of these locations? b) We assume that no processing work for any of the Tasks defined in the Scope of Services would be required to be done for the 'no-fly' zone areas. Please confirm.	a) These will be intimated as per details available in the MoD/Defence Clearance, after it is received. b) No processing work of any of Tasks will be required in such areas.
68	Clause 5.5.2 of Section 5, Page# 85-87	<u>UTM Mapping Projection</u> The Project areas would be covered in four UTM Zones (42N to 45N). We presume that all inputs and outputs/deliverables will be commensurate to these UTM Zones, and no transformation or re-projection tasks would be required. Please confirm.	Inputs /Outputs will be commensurate to UTM Zones. However, transformation or re-projection cannot be ruled out, especially at edges of UTM Zones.
69	Clause 5.6 of Section 5 Page#: 89 of 120	<u>5.6 DELIVERABLES</u> We presume that the specified GDB is 'Personal GDB' and not a 'File GDB'. Please confirm.	Personal geo-database

70	<p>Item 13 of Bill of Quantities Sub-Zone I-A,VIII-A at Section 7</p>	<p><u>Bill of Quantities: - Training of 20 SOI staff for 1 month in the software, systems and processes being used by the contractor.</u></p> <p>It is presumed that the SOI staff would hold the prerequisites in terms of the technology and familiarity with use of Photogrammetric workstations. Please confirm.</p>	<p>Yes.</p> <p>Training is to be conducted by the successful bidders of each of the eight Zones to a batch of 20(twenty) trainees each. The venue of training shall be at Indian Institute of Survey & Mapping, Hyderabad(including for Zones allotted to the Bangalore Production site.) , as Hostel facilities are available at IISM,Hyderabad. Training material in soft and hard copies as well as SOPs for all practical exercises for components of work such as AT, DEM creation & editing, stereo-feature extraction, ortho-photo generation, Inundation modeling, digital shoreline analysis etc will have to be provided by the contractor to each of the 20 trainees . 3(three) additional copies of Training Materials & SoPs shall also be provided.</p> <p>Also, training for Data Management shall be provided by the Contractor to a batch of 5(five) SoI officers for 1(one) week in respect of systems to be used by them. The training of this sub-component shall be conducted on-site after completion of site-</p>
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			preparation. Suitable amendment will be issued giving details.
71	Table 1.3.1, 1.3.2, 1.3.3, 1.4 (A), 1.4 (B) of Section 2	<p><u>(Attach notarized copy of certificate(s) from the Engineer(s)-in-Charge or equivalent, certifying the details furnished in table above.)</u></p> <p>We do not have such designation in our organization. Can our company Secretary certify the details? Can we submit this document attested by any gazetted officer instead of notarization?</p>	<p>These refer to the Clients for whom the bidder has provided services. They do not refer to the designation of bidder's organization.</p> <p>Notarized documents to be submitted.</p> <p>However, the details certified by Company Secretary shall also be accepted.</p>
72	<p>Clause 43.1 of Secion 3 of Contract)</p> <p>Page#. 53 of 120</p>	<p><u>Payments shall be adjusted for deductions for advance payments, retention, other recoveries in terms of the contract and taxes, at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer within 28 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made upto the date when the late payment is made at 8% per annum.</u></p> <p>We request you to kindly amend the clause to "Payments shall be adjusted for deductions for advance payments, retention, other recoveries in terms of the contract and taxes, at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer</p>	<p>This is as per the Project's Procurement Manual.</p>

		<p>within 28 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made upto the date when the late payment is made at 5% per annum”.</p>	
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GOVERNMENT OF INDIA SOCIETY OF INTEGRATED COASTAL MANAGEMENT (SICOM) MINISTRY OF ENVIRONMENT & FORESTS

INTEGRATED COASTAL ZONE MANAGEMENT PROJECT COASTAL HAZARD LINE MAPPING PROJECT OF SURVEY OF INDIA. PROCUREMENT OF PROVISION OF GROUND CONTROLS AND DIGITAL PHOTOGRAMMETRY IN THE 7 KM BELT OF THE INDIAN MAINLAND COAST IN EIGHT BLOCKS [IFB NUMBER: PROC/SICOM/SOI/2011/01 DATED 19/10/2011]

Clarifications # 2 to Queries Q73 to Q103 Dated: December 11, 2011.

Clarifications to Queries Q73 to Q103 received after the pre-bid meeting held on 11/11/11, are given below.

73	Clause 4.5A(a) / Page 11 of IFB	<p>Qualification Criteria – Minimum annual financial turnover. <u>In case we bid for all the 8 Zones, do we need to show turnover aggregate of all Zones?</u></p>	<p>A bidder may not meet the aggregate of the qualifying criteria for all the Zones but can still submit bids for all 8 Zones (slices).</p> <p>A bidder may be awarded package of 1 or more Zones, provided he meets the aggregate of the qualifying criteria for the individual Zones. Please refer Clause 4.5 C and 31 of ITB.</p>
74	Clause 4.5A(b) / Page 11 of IFB	<p>Qualification Criteria – Similar Work In case we bid for all 8 Zones, do we need to show separate project for each zones, having values indicated in Table 3? Or can we submit a single order with value aggregate of all zones?</p>	<p>Both the options are OK.</p> <p>The bidder may show separate project for each zones OR can submit a single order with aggregate of all Zones.</p> <p>It is further clarified that any single order, meeting the aggregate criteria of multiple Zones, shall be considered to meet Qualification Requirement of any such multiple Zones.</p> <p>Amendment is also being issued to make this explicit in the bid-document.</p>
75	Clause 4.5A(c,d) / Page 12 of IFB	<p>Qualification Criteria – Survey Work (GNSS/GPS, leveling) In case we bid for all 8 Zones, do we need to show separate project for each zones, having values indicated in Table 3? Or can we submit a single order with value aggregate of all zones?</p>	<p>Table 3 does not relate to Section, 1 Clause 4.5 A(c,d) in any manner.</p> <p>However, bidders can submit separate projects for each zone or a single order</p>

			<p>meeting the value aggregate of all Zones.</p> <p>Moreover, it is further clarified that for Clause 4.5A(c, d), the aggregate of all multiple contracts executed by the Contractor shall be checked against the Qualifying value.</p> <p>For multiple Zones, the qualification criteria shall correspond to aggregate requirements of multiple Zones.</p> <p>ie. Qualifying Value x (no. of Zones)</p>
76	<p>Clause 4.5B(a,b) / Page 12 of IFB</p>	<p>Qualification Criteria – Equipment, Man Power</p> <p>In case we bid for 8 Zones, do we need to show separate set of equipment / Man power for each zones? Or can we submit a single set with value aggregate of all zones?</p>	<p>The availability proposal of equipments are to be furnished as per Table 1.5 (Section 2). Value aggregate of all/multiple Zones are to be submitted. The availability proposal is not required to be split Zone-wise.</p> <p>The proposal of deployment of key-personnel can be furnished as aggregate requirement in fulfillment of Zones bid for – in Table 1.6(a) of Section 2.</p> <p>However, the details of Proposed Positions (Names) are to be furnished</p>

			<p>Zone-wise as per Table 1.6(b).</p> <p>The Contractor may however be permitted by the Engineer to change the Zone-wise deployment plan submitted in the bid, from amongst the key-personnels proposed in the bid, after the final award of Contract on specific request by the Contractor.</p>
77	4.5B(c) of ITB	<p><u>Qualification Criteria – Liquid Asset</u> <u>In case we bid for all 8 Zones, do we need to show separate letter for each zone, indicating value given in Table 4? Or can we submit single letter with value aggregate of all Zones.</u></p>	<p>A single letter from the Bank, as per the sample format given in the bid document, for aggregate value will suffice. Multiple letters showing split value for each Zone is not required.</p>
78	Clause 4.5A(b)/Section 1(ITB)/Page 11 and Clause 1.3.1/Section 2/Page 28	<p>Qualification Criteria – Similar work There is a discrepancy in value given in these two clauses. Pl. clarify which is correct?</p>	<p>Clause 4.5A(b)/Section 1(ITB) is correct.</p> <p>Amendment is being issued to make Section 2, Clause 1.3.1 consistent with Section 1, clause 4.5A(b).</p>
79.	Clause 4.5 A (a), Page 11	<p>The Clause 4.5 A (a), Page 11 lists out the total turnover required to qualify for award of the contract for any Zone. It will be seen that the figure of Rs 55 million is the highest turnover that should have been achieved in any two years out of the last five years. This if achieved, will qualify the bidder to bid for any or a combination of the eight zones.</p> <p>Clause 4.5 C, Page 12, suggests that in order to qualify for</p>	<p>The clause has been grossly misunderstood. Col. 2 of Table 2 corresponds to the respective Zone mentioned against it at Col 1 of Table 2. Aggregate of qualifying criteria has to be met for award of package comprising multiple Zones.</p>

		<p>award (not just bidding) of the contracts for say, Zone 1, 2, 3 & 4, the bidder has to demonstrate “experience and resources sufficient to meet the aggregate of qualifying criteria for the individual contracts’.</p> <p>Thus reading Clause 4.5A in conjunction with Clause 4.5 C, Page 12, suggest that the qualifying criteria for Zone 1, 2, 3 & 4,, entails showing a turnover equal to the sum of (55 + 55 + 33 + 42 millions = INR 185 million.)</p> <p>The turnover criteria calculated on basis of aggregate for individual projects seems to be on the higher side. Please confirm our understanding is correct.</p>	<p>Clause 4.5A & clause 4.5B have to be read in conjunction with Clause 4.5C.</p> <p>Also please refer answer to query No.73, above.</p>
80	<p>Clause 4.5 C Clause 4.5 A (b) (i), Page 11</p>	<p>Clause 4.5 C Clause 4.5 A (b) (i), Page 11 specifies “at least one similar work, of value not less than as per column 2 of Table 3, from photogrammetric related work... “Table 3 gives values not less than INR 44, 44, 26 & 34 Millions for Zones 1,2,3,4 respectively.</p> <p>Clause 4.5 C, Page 13 states, “To qualify for a package of contracts (Zones) made up of this and other contracts for which bids are invited in the IFB, the bidder must demonstrate having experience and resources sufficient to meet the aggregate of qualifying criteria for the individual contracts’ This works to a total of INR 148 million for these 4 zones.</p> <p>Our understanding is that Clause 4.5 C substantially increases the values defined in Clause 4.5A (b) (i). Kindly confirm if the higher values defined in Clause 4.5 C i.e. calculation of aggregate - are to be taken as guiding factor</p>	<p>Clause 4.5A & clause 4.5B have to be read in conjunction with Clause 4.5C.</p> <p>Clause 4.5C clearly states that aggregate of qualifying criteria has to be met for award of package comprising multiple Zones.</p>

		for calculating the eligibility for bidding for a group of Zones.	
81	Clause 4.5 A (b), Page 11	<p>Clause 4.5 A (b), Page 11. Many International tenders invited for Photogrammetry jobs and funded through International aid programmes or by the World Bank do not refer to “work of minimum value as single work orders”. Generally these refer to overall turnover of the bidders.</p> <p>Even in these tenders, the Flying component remains the major single value component. All projects demand different deliverables and may not include all components like Contouring, Vector generation, Ortho generation. Further, if the Flying and Field components are removed from such calculations, the values of other jobs reduces considerably. Resultantly, very few projects and hence even lesser companies would become eligible to be considered for award (not Bidding) of bigger zones or more than one zone. Further, it is very likely that any company which qualifies the stated Eligibility criteria, would be a foreign company and hence would bid at higher values.</p> <p>We would thus request for review of these aspects:-</p> <p>(a) The Qualification criteria pertaining to the “minimum value of single work order”.</p> <p>(b) The mandatory qualification on basis of ‘all components”.</p>	<p>Standard Bidding Document for National Competitive Bidding has been adopted as per the Project's Procurement Manual.</p> <p>4.5A(b) ie. ‘similar work’ clause and 4.5C ie. Aggregate clause are integral parts of all NCB (also ICB) bids and refers to single order only. The qualification criteria stipulated for each Zone is strictly as per the Project's Procurement Manual.</p> <p>Flying component cannot be included as similar work, as the scope of work in this bid does not include flying at all. A separate contract has already been awarded for that component.</p> <p>Regarding field component, amendment is being issued vide which field components shall also be included as part of qualifying clauses 4.5A(a) and 4.5A(b).</p> <p>The apprehension that the company meeting the eligibility clauses laid</p>

		(c) The Aggregate turnover in Clauses 4.5 C.	<p>down in bid document shall not be met by any Indian Company leading to higher contract prices from Foreign Companies, is baseless.</p> <p>Also contour generation is being removed from the list of 'component that should necessarily form a part of the work' that is to be checked for compliance of 4.5A(b) .</p>
82	<p>Clause 4.5A, Section 1,Page 12 Table 1.2, Table 1.3.1, Section 2, Page 28</p>	<p>The RFP on pages 12 & 28 has mention of comment “*at 2011-2012 price level. Financial turnover and cost of completed works of previous years shall be given weightage of 5% per year based on rupee value to bring them to 2011-2012 price level”.</p> <p>While the audited Annual Accounts will reflect the figures as obtaining in previous years, please clarify if a separate certificates from Chartered Accountant is required to be obtained incorporating the above mentioned weightages, or will the Audited Annual Statements be acceptable and the weightage assigned at your end?</p> <p>Clause 4.5 A (c) & (d), page 12</p>	<p>Audited Annual Statements shall be accepted. Weightage shall be assigned at our end.</p>
83	<p>Clause 4.5 A (c) & (d), page 12 -</p>	<p>Can the Bidder and Survey vendor be allowed to club their turnovers to meet the qualification criteria of INR 5 million, each for GPS / GNSS and Spirit Levelling work? Please confirm.</p>	<p>No. However, qualification criteria of INR 5 million has now been relaxed, vide amendment # 2 dated 12/12/2011</p>

			issued.
84	Clause 4.5 A (c) & (d), page 12	<p>Majority of survey works have varied Survey related items such as Establishing GPS control points, establishing BM's, Plane Table Survey, Levelling, etc. In our more than three decades of experience, we have executed major survey works having these components. But from our experience, we feel that in general the quantum of GPS / GNSS survey and spirit levelling components in routine survey intensive projects do not account for such significant values, as compared to other components. We are of the firm opinion that most of the Survey vendors may not qualify the 5 million figures for each of these components. Thus, we strongly believe that these criterias will prohibit a majority of Survey vendors with excellent experience and reputation from competitively participating in this project. May we request you to review these qualification criterias?</p> <p>Clause 4.5 B (a), page 12</p>	Amendment issued to relax the qualification criteria for GNSS/GPS work to 3(three) million and Spirit Leveling and/or Total Station work to 2(two) million.
85	Clause 4.5 B (a), page 12	<p>It is felt that the HW/SW calculations listed in Clause 4.5 B are based on a single shift production plan. Creating this infra structure to meet the minimum qualification becomes very cost intensive. May we request you to review and reduce the HW/SW requirements?</p>	<p>HW/SW listed are not based on single shift production plans.</p> <p>Please refer reply to query at SNo. 10 & SNo 34 - Clarification#1</p>
86	Clause 4.5, Section 1	<p><u>Qualification Criteria for IT vendor:</u></p> <p>The Tender document does not lay down any Qualification criteria for the IT vendor. We understand that the bidder can also take on that component of work without having to show</p>	No document is to be produced for completing similar works for IT component. However, the detailed plan of this component is also to be

		documentary evidence of completing similar works for other clients. Please confirm.	furnished as per Clause 4.3(k), which shall be evaluated for responsiveness. Pl. refer reply to query at SNo. 7 - Clarification#1. It is also informed that a separate Bid/Tender is being proposed for the establishment of a Data Centre.
87	Clause 5.5.1.2 : Ground Control Accuracy, page 78, 79	9) Clause 5.5.1.2 : Ground Control Accuracy, page 78, 79 - “The planimetric accuracy of control points is to be within $\pm 5\text{cm}$.” As we understand it, the specified accuracy is the standard deviation (1σ) obtained for each of the coordinates after network adjustment. Kindly verify.	The specified accuracy is the 3-sigma standard deviation after network adjustment. (not 1-sigma) ,
88	Clause 5.5.1.2 : Ground Control Accuracy, page 78, 79	“The height accuracy of control points in plain areas should be within $\pm 10\text{ cm}$. The permissible error in heights between two Bench Marks in ST leveling is $24\sqrt{k}\text{ mm}$ where ‘k’ is the distance between the two Bench Marks in kilometers. If the length of level lines between two start/end bench marks is more than 16 km then DT leveling has to be carried out by the Contractor. Heights of post-pointed controls obtained by leveling lines, which do not meet the permissible accuracy, should be rejected and provided afresh.” The clause does not state whether the heights should be adjusted or not. How do you check that the height accuracy is within $\pm 10\text{ cm}$? The only error estimate is the closure	No DT leveling is required to be run by the Contractor. Please refer clause 5.2.1, which stipulates that sufficient density of BM shall be made available to the Contractor. For marshy/inaccessible regions, pl. refer clause 5.4.3.3 of Section 5. The heights should be adjusted for lines which pass the permissible error in heights between two Bench Marks in ST leveling (ie. $24\sqrt{k}\text{ mm}$). Final heights Please refer Clause 5.5.1.9.5,

		error ($24\sqrt{k}$ mm) obtained after closing on the bench mark.	<p>Section 5 vide which adjusted vertical control points are to be submitted by the Contractor.</p> <p>Processes govern the accuracies. Any line passing the closure test (ie. $24\sqrt{k}$ mm) between framework controls provided by Engineer shall be accepted as meeting the accuracy requirement spelt out in the Bid-Document.</p>
89	<p>Clause 5.5.1.3.1: GPS Observations, page 79</p> <p>-</p>	<p>As per the above clause, the control points should be at ground level and well identifiable on photograph as well as on ground. No specifications on how the control point is to be marked on the ground so that it is visible in the photograph as well are provided. Please elaborate the monumentation requirements.</p>	<p>Pl. read Clause 5.5.1.3.1 completely. The types of details which can be identifiable on ground as well as photographs have been described. Moreover, minimum monumentation (iron-pin, iron nail) has also been described.</p> <p>It seems the clause has been mistaken to be for pre-pointing. It is clarified that the clause is all about provision of control for post-pointing and has nothing to do with pre-pointing.</p>
	<p>Clause 5.5.1.9.2:</p>	<p>It is mentioned that the mis-closure should not be more than 2cm in case of each loop. Instead of specifying the absolute error (mis-closure), relative error (relative mis-closure) i.e. (mis-closure) / (perimeter of the loop) should be used.</p>	<p>The perimeter of the figures in observation network in the present contract will be much less(expected to be less than 20km) than the perimeters</p>

90	Networks, page 83		of figures generally associated with GPS networks. All observations with dual frequency GPS instruments shall meet this accuracy.
91	Clause 5.5.1.9.2: Networks, page 83	<p>In the second point of the same clause, "The second quality control procedure in a network is to compute a minimally constrained least squares adjustment using one of numerous adjustment programs available today. This adjustment should normally be performed only after bad lines have been eliminated using loop closure programs. A single loop would provide the minimum required information needed for network analysis and this value should not be more than 2 cm."</p> <p>What is meant by "this value (i.e. 2 cm)" in the above statement?</p>	It refers to loop-misclosure before adjustment.
92	Clause 5.5.1.9.3: Network Adjustment, page 83	<p>14) Clause 5.5.1.9.3: Network Adjustment, page 83 - "The tie of GPS surveys to existing triangulation monuments enables the transformation of GPS results in to the national datum. In most cases, the fixed control agrees quite well and the final adjustment is then performed. The constrained (fixed) adjustment results when two or more horizontal control points are held fixed."</p> <p>Is this just a statement provided for information or the contractor is supposed to perform the above mentioned transformation? There should be no need to transform GPS</p>	<p>The basic control frame-work data to be provided by the Engineer are in ITRF co-ordinate system .</p> <p>These points shall be held fixed during constrained adjustment performed by the Contractor.</p> <p>This will automatically ensure consistency of GPS observations with the national datum.</p>

		<p>surveys in to the national datum. Also, it is mentioned in the document that WGS84 datum should be used in the entire project. Kindly clarify.</p> <p>Clause 5.5.2.1, page 85</p>	
93	<p>Clause 5.5.2.1, page 85</p>	<p>Clause 5.5.2.1 (Salient features of Aerial Triangulation / Block Adjustment), page 85, the accuracy demanded is 30cms.</p> <p>This is the same as specified and clarified at Sl. No. 28, page 71 of amendment # 1, dated 18-Nov-10 for the Flying phase</p> <p>Tender (IFB No. Proc / SICOM / SOI / 2010 / 01).</p> <p>We therefore understand that the successful Bidder would be provided the AT results from flying phase. We recommend that the AT results of the First Phase be used in this Phase as it will result in savings by eliminating duplication. Please confirm.</p>	<p>Pl. refer clause 5.2.4/Section 5 where it is clearly mentioned that EO parameters associated with each frame shall be provided as input.</p> <p>Also refer Clause 5.5.2.1, Section 5,page 86, wherein it is clearly stated that position and attitude information of exposure stations should be used as initial approximate values for EO parameters.</p> <p>On careful reading of Flying bid and the present bid, one can easily understand that there is no duplication.</p> <p>Bidders shall submit offers that comply with the requirements of the bidding documents, including the basic technical design as indicated in the drawing and specifications. Alternatives will not be considered.</p>
94	<p>Clause 5.5.2.3, page 86</p>	<p>Clause 5.5.2.3 (DTM Generation and Editing), page 86, the grid spacing of 5 metre and the height accuracy of 25 cms. An amendment issued during the Flying Phase vide Sl. No. 28, page 71 of amendment # 1, dated 18-Nov-10, specifies:</p>	<p>The understanding is totally wrong.</p> <p>Please read the specifications of this bid document. The AT, DEM are based on spirit leveled heights, which</p>

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95	Clauses 1/1.1; 3F/2, 2.1; 5/5.1 at Pages 9, 60 & 73	<p>Scope of Work “Data management including daily incremental backup, monthly full backup of data as per the back-up plan submitted by the Contractor and approved by the Engineer.”</p> <p>Since the monthly full back up of data is likely to take very long time, we would like to propose ‘weekly’ full back up.</p>	Amendment is being issued vide which instead of ‘monthly’ full back up shall be amended to ‘weekly’ full back-up.
96	2/Table 1.5; 3F/2,2.1;	Appropriate Storage System * # (entire Storage with OS, Controller, LAN, Server, back up systems and other	A system with adequate performance, usable space, scalability, flexibility,

	<p>5/5.1 Pages 31, 59, 60, 69, 73, 74 – Scope of Work - IT</p>	<p>accessories etc.)</p> <p>We understand that Data Security of this project is of utmost importance. If the Storage Supplied by the Vendor does not have the Enterprise Class Features then the Security of Data is at risk. Therefore, we would recommend change in specification to “Appropriate Enterprise Storage System”.</p>	<p>security, authentication services is implied by ‘Appropriate Storage’.</p> <p>The architecture , specifications of the systems have not been spelt out explicitly- as has been the case with other critical equipments mentioned at 4.5B(a).</p> <p>Please refer reply to query at SNo. 7 of Clarification #1 also.</p>
97	<p>Clause 5/5.2 at page 73</p>	<p>Input Material</p> <p>Can you please provide us the no. of images for each zone? Else, please let us know the format of camera being used for imagery capture in each zone.</p>	<p><u>As per the estimates available on-date the details are as follows:</u></p> <p><u>DMC I Camera, for all the 8 zones.</u></p> <p>Block 1: 61,393 Images Block 2: 61,007 Images Block 3: 34,214 Images Block 4: 37,899 Images Block 5: 24,951 Images Block 6: 25,833 Images Block 7 31,279 Images Block 8 58,043 Images</p>
98	<p>Clause 5.7 at Section 5 at page 90</p>	<p>Can you please elaborate regarding the phases and number of copies that the Engineer would expect to be taken on Disk based libraries?</p>	<p>Three copies.Please refer Clause 5.7 at Section 5 (Delivery Instructions) . Phases shall be photogrammetric block-wise for deliverables pertaining to a block & after completion of Zone for seamless deliverables. Please refer Clause 14 of Section 3F (SCC) in this</p>

			regard.
99		<p>Backup of the Processed Data</p> <p>As per the RFP Engineer does need 2 Golden Copies of the Processed Image.</p> <p>Does That mean the Engineer would like to take a backup on Disk Based Library after every step mentioned below.·</p> <ul style="list-style-type: none"> • Aerial triangulation· • Feature Extraction in Stereo mode as per the Data Model Structure (DMS) • DTM and TIN generation and editing· • Contour generation and editing· • Ortho-rectification, Ortho-mosaic· • Integration of important attribute information into the spatial database from the annotations of existing SoI maps <p>Yes/No</p>	<p>The question is not clear. The query seems to suggest that a copy of processed image is required to be submitted after each of the stages mentioned in the query.</p> <p>The only deliverable to be submitted as “processed imagery” is ortho-imagery.</p> <p>Once the block file of AT (alongwith the uniquely numbered imageries) is submitted as deliverable – submission of other deliverables like the vector files (of stereo-feature extraction), DTM, TIN, contours, attribute information do not require submission of imagery again.</p> <p>Pl. refer clause 5.6 & 5.7 of Section 5 (Specifications) which describes the ‘Deliverable’ and ‘Delivery Instructions’ in detail.</p> <p>All deliverables are required to be submitted in 3(three) copies.</p>
100	Clause 4.4 of Section 1, page 11	We are willing to participate in this Provision of Ground Controls and Digital Photogrammetric Work tender. Kindly	Participation of foreign agency is

		allow us to bid with foreign agency as the joint venture. Clause 4.4 of page 11.	allowed. The entire package has been sliced into 8 Zones to allow bidding by small as well as big companies. The qualification criteria for sub-contractors have been further relaxed.(please see amendment # 1 dated 12/12/2011) Joint Venture has not been allowed for this bid.
101	Clause 4.4 of Section 1, page 11	The eligibility conditions mentioned here can be considered for the consortium – instead of individual partner and one of the partners can be identified as lead partner and the consortium partners can be jointly and severally responsible.	Pl. refer S. No. 100 - Clarification#2.
102	Clause 4.5B(c) of Section 1, page13	The letter of credit from the bank “Article 4.5 B (C), may be allowed to be given on award of contract / issue of acceptance letter, instead of submitting the same during the proposal submission.	As per the Project's Procurement Manual, The liquid assets and/or letter of credit / certificate from the bank are Qualification Criteria, which are evaluated for award of the contract. Hence, it is to be submitted along with the bid. The values given in 1/ 4.5B(c) / Table 4 is strictly as per as per the Project's Procurement Manual. If the credit line/letter of

			credit/certificate from bank is not submitted along with the bid, the bidder will be evaluated on the basis of his Liquid Asset alone.
103	Clause 5/5.2 at page 73	<u>Input Material</u> Size of Each Image	0.69 GB (Tiff Format).