Procurement of Non-Consultant Services

& User's Guide



The World Bank

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Revisions

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The features of May 2004, revised October 2006, Procurement Guidelines have been incorporated.

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Introduction

Procurement under projects financed by the International Bank for Reconstruction and Development (IBRD) and its affiliate, the International Development Association (IDA),¹ is carried out in accordance with policies and procedures laid down in the *Guidelines: Procurement under IBRD Loans and IDA Credits* (hereinafter called *Procurement Guidelines*). To help Borrowers to contract the performance of Non-Consultant Services (services that are not classified as Consultant Services) the Bank has designed these sample bidding documents to be used voluntarily on a trial basis. Non-Consultant Services will hereinafter be referred to simply as "Services".

The Sample Bidding Documents in this publication have been prepared for use by Borrowers in the procurement of Services by International Competitive Bidding (ICB). These documents may also be adapted to National Competitive Bidding (NCB) with some changes generally necessary in the Instructions to Bidders and the Conditions of Contract.

These Sample Bidding Documents are intended as model lump sum types of Contract, which are the most common in Services contracting. Lump sum contracts are used in particular for Services which are well defined and are unlikely to change in quantity or specification, and where encountering difficult or unforeseen site conditions are unlikely.²

Care should be taken to check the relevance of the provisions of the standard documents against the requirements of the specific Services to be procured. The following directions should be observed when using the documents:

- (a) All the documents listed in the Table of Contents are normally required for the procurement of Services; however, they should be adapted as necessary to the circumstances of the particular Project.
- (b) Details to be provided by the Employer prior to release of the bidding documents are limited to the Invitation for Bids (User's Guide), Instructions to Bidders (Section I), Bidding Data Sheet (Section II), and Special Conditions of Contract (Section VII), in addition to Sections V and VIII, which deal with Activity Schedule, Performance Specifications and Drawings, respectively. Specific details should be furnished in the spaces indicated by italicized notes inside brackets. Those details not filled in by the Employer are the responsibility of the Bidder.

¹ IBRD and IDA are generally referred to as the World Bank. Since the procurement requirements for IBRD and IDA are identical, "World Bank" in this handbook refers to both **IBRD** and **IDA**, and "**loan**" refers to either an **IBRD loan** or an **IDA credit**. However, for the Invitation for Bids, the distinctions are retained.

² Lump sum contracts should be used for Services that can be defined in their full physical and qualitative characteristics before bids are called, or where the risks of substantial design or performance variations are minimal. In lump sum contracts, the concept of priced "activity schedules" has been introduced, to enable payments to be made as "activities" are completed. Payments can also be made on the basis of percentage completion of each activity.

- (c) These Sample Bidding Documents are intended to serve on a repetitive basis in a Borrower's country, once agreement between the Borrower and the World Bank has been reached. Modifications to address specific Project or Contract needs should be provided only in the Special Conditions of Contract as amendments to the Conditions of Contract. If modifications must be made to the bidding procedures, they can be presented in the Bidding Data Sheet.
- (d) The foot-notes and the notes inside boxes with single borders are not part of the text, but rather contain instructions for the user, as do the Preface and this Introduction section. They should not be incorporated in the bidding documents. The cover should be modified as required to identify the bidding documents as to the names of the Project, Contract, and Employer, in addition to the date of issue.
- (e) The notes inside boxes with double borders should be retained in the issued bidding documents, since these notes provide important guidance to bidders.
- (f) The standard documents have been prepared for bidding where postqualification applies; adaptations are necessary to ITB Clause 5 and corresponding Bidding Data Sheet, and Forms when prequalification has taken place. The process of prequalification of bidders is not covered in these standard documents.

Summary Description

These Standard Bidding Documents for Procurement of Works and its User's Guide apply either when a prequalification process has taken place before bidding or when a prequalification process has not taken place before bidding (provided alternative documents should be selected as applicable). A brief description of these documents is given below.

SBD for Procurement of Works

Summary

PART 1 – BIDDING PROCEDURES

Section I: Instructions to Bidders (ITB)

This Section provides relevant information to help Bidders prepare their bids. Information is also provided on the submission, opening, and evaluation of bids and on the award of Contracts. Section I contains provisions that are to be used without modification.

Section II. Bidding Data Sheet (BDS)

This Section consists of provisions that are specific to each procurement and that supplement the information or requirements included in Section I, Instructions to Bidders.

Section III: Bidding Forms

This Section contains the forms which are to be completed by the Bidder and submitted as part of his Bid.

Section IV. Eligible Countries

This Section contains information regarding eligible countries.

PART 2 – ACTIVITY SCHEDULE

Section V. Activity Schedule

This Section contains the activity schedule.

PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

Section VI. General Conditions of Contract (GCC)

This Section contains the general clauses to be applied in all contracts. The text of the clauses in this Section shall not be modified.

Section VII. Special Conditions of Contract (PCC)

The contents of this Section supplement the General Conditions of Contract and shall be prepared by the Employer.

Section VIII. Performance Specifications and Drawings

This section contains Specifications that are intended only as information for the Employer or the person drafting the bidding documents. **They should not be included in the final documents.**

Section IX: Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for **Performance Security** and **Advance Payment Security**, when required, shall only be completed by the successful Bidder after contract award.

Part I – Bidding Procedures

Section I. Instructions to Bidders

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Instructions to Bidders

A. General

- 1. Scope of Bid 1.1 The Employer, as defined in the **Bidding Data Sheet (BDS)**, invites bids for the Services, as described in the Appendix A to The name and identification number of the the Contract. Contract is **provided in the BDS**.
 - 1.2 The successful Bidder will be expected to complete the performance of the Services by the Intended Completion Date provided in the BDS.
- 2. Source of 2.1 The Borrower, as **defined in the BDS**, intends to apply part of Funds the funds of a loan from the World Bank, as defined in the BDS, towards the cost of the Project, as defined in the BDS, to cover eligible payments under the Contract for the Services. Payments by the World Bank will be made only at the request of the Borrower and upon approval by the World Bank in accordance with the Loan Agreement, and will be subject in all respects to the terms and conditions of that Agreement. Except as the World Bank may specifically otherwise agree, no party other than the Borrower shall derive any rights from the Loan Agreement or have any rights to the loan proceeds.
- It is the Bank's policy to require that Borrowers (including 3. Corrupt or 3.1 beneficiaries of Bank loans), as well as bidders, suppliers, and Fraudulent contractors and their subcontractors under Bank-financed **Practices** contracts, observe the highest standard of ethics during the procurement and execution of such contracts.³ In pursuance of this policy, the Bank:
 - (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - "corrupt practice"⁴ is the offering, giving, receiving or (i) soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - "fraudulent practice"⁵ is any act or omission, (ii) including a misrepresentation, that knowingly or

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³ In this context, any action taken by a bidder, supplier, contractor, or a sub-contractor to influence the procurement process or contract execution for undue advantage is improper.

⁴ For the purpose of these SBDs, "another party" refers to a public official acting in relation to the procurement process or contract execution]. In this context, "public official" includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

- (iii) "collusive practice"⁶ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) "coercive practice"⁷ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- (v) "obstructive practice" is
 - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
 - (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under para. 1.14 (e) of the Bank's Procurement Guidelines.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;
- (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, coercive or obstructive practices

⁵ For the purpose of these SBDs, "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

⁶ For the purpose of these SBDs, "parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

⁷ For the purpose of these SBDs, "party" refers to a participant in the procurement process or contract execution.

during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;

- (d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a Bank-financed contract; and
- (e) will have the right to require that a provision be included in bidding documents and in contracts financed by a Bank Loan, requiring bidders, suppliers, contractors and consultants to permit the Bank to inspect their accounts and records and other documents relating to the Bid submission and contract performance and to have them audited by auditors appointed by the Bank.
- 3.2 Furthermore, Bidders shall be aware of the provision stated in Sub-Clauses 1.7 and 2.6.1 of the General Conditions of Contract.
- 1 This Invitation for Bids is open to all bidders from eligible countries as defined in the Procurement Guidelines. Any materials, equipment, and Services to be used in the performance of the Contract shall have their origin in eligible source countries.
 - 4.2 All bidders shall provide in Section III, Bidding Forms, a statement that the Bidder (including all members of a joint venture and subcontractors) is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Borrower to provide Consultant Services for the preparation or supervision of the Services, and any of its affiliates, shall not be eligible to bid.
 - 4.3 Government-owned enterprises in the Employer's country may only participate if they are legally and financially autonomous, operate under commercial law, and are not a dependent agency of the Employer.
 - 4.4 The loan agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or

4. Eligible Bidders for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by a decision of the United Nations Security Council, taken under Chapter VII of the Charter of the United Nations.

- Bidders shall not be under a declaration of ineligibility for 4.5 corrupt and fraudulent practices issued by the Bank in accordance with ITB Sub-Clause 3.1.
- All bidders shall provide in Section III, Bidding Forms, a 5.1 of the Bidder preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.
 - In the event that prequalification of potential bidders has been 5.2 undertaken as stated in the BDS, only bids from prequalified bidders shall be considered for award of Contract, in which case the provisions of sub-clauses 5.3 to 5.6 hereafter shall not apply. These qualified bidders should submit with their bids any information updating their original prequalification applications or, alternatively, confirm in their bids that the originally submitted prequalification information remains essentially correct as of the date of bid submission. The update or confirmation should be provided in Section IV.
 - If the Employer has not undertaken prequalification of potential 5.3 bidders, all bidders shall include the following information and documents with their bids in Section IV, unless otherwise stated in the BDS:
 - copies of original documents defining the constitution or (a) legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder;
 - total monetary value of Services performed for each of the (b) last five years;
 - (c) experience in Services of a similar nature and size for each of the last five years, and details of Services under way or contractually committed; and names and address of clients who may be contacted for further information on those contracts;
 - (d) list of major items of equipment proposed to carry out the Contract:
 - (e) qualifications and experience of key site management and technical personnel proposed for the Contract;
 - (f) reports on the financial standing of the Bidder, such as

5. Qualification

profit and loss statements and auditor's reports for the past five years;

- (g) evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);
- (h) authority to the Employer to seek references from the Bidder's bankers;
- (i) information regarding any litigation, current or during the last five years, in which the Bidder is involved, the parties concerned, and disputed amount; and
- (j) proposals for subcontracting components of the Services amounting to more than 10 percent of the Contract Price.
- 5.4 Bids submitted by a joint venture of two or more firms as partners shall comply with the following requirements, unless otherwise stated in the **BDS**:
 - (a) the Bid shall include all the information listed in ITB Sub-Clause 5.3 above for each joint venture partner;
 - (b) the Bid shall be signed so as to be legally binding on all partners;
 - (c) the Bid shall include a copy of the agreement entered into by the joint venture partners defining the division of assignments to each partner and establishing that all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms; alternatively, a Letter of Intent to execute a joint venture agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed agreement;
 - (d) one of the partners shall be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; and
 - (e) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.
- 5.5 To qualify for award of the Contract, bidders shall meet the following minimum qualifying criteria:
 - (a) annual volume of Services of at least the amount specified

in the BDS;

- (b) experience as prime contractor in the provision of at least two service contracts of a nature and complexity equivalent to the Services over the last 5 years (to comply with this requirement, Services contracts cited should be at least 70 percent complete) **as specified in the BDS**;
- (c) proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment **listed in the BDS**;
- (d) a Contract Manager with five years' experience in Services of an equivalent nature and volume, including no less than three years as Manager; and
- (e) liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of no less than the amount specified in the **BDS**.

A consistent history of litigation or arbitration awards against the Applicant or any partner of a Joint Venture may result in disqualification.

- 5.6 The figures for each of the partners of a joint venture shall be added together to determine the Bidder's compliance with the minimum qualifying criteria of ITB Sub-Clause 4.4(a), (b) and (e); however, for a joint venture to qualify the partner in charge must meet at least 40 percent of those minimum criteria for an individual Bidder and other partners at least 25% of the criteria. Failure to comply with this requirement will result in rejection of the joint venture's Bid. Subcontractors' experience and resources will not be taken into account in determining the Bidder's compliance with the qualifying criteria, unless otherwise stated in the BDS.
- 6. One Bid per Bidder
 6.1 Each Bidder shall submit only one Bid, either individually or as a partner in a joint venture. A Bidder who submits or participates in more than one Bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.
- 7. Cost of Bidding
 7.1 The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible or liable for those costs.
- 8. Site Visit 8.1 The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site of required Services

and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the Site shall be at the Bidder's own expense.

B. Bidding Documents

9. Content of
Bidding9.1The set of bidding documents comprises the documents listed in
the table below and addenda issued in accordance with ITB
Clause 11:

Section I	Instructions to Bidders
Section II	Bidding Data Sheet
Section III	Bidding Forms
Section IV	Eligible Countries
Section V	Activity Schedule
Section VI	General Conditions of Contract
Section VII	Special Conditions of Contract
Section VIII	Performance Specifications and Drawings (if Applicable)
Section IX	Contract Forms

....

- 9.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in the rejection of its bid. Sections III, V, and IX should be completed and returned with the Bid in the number of copies specified in the **BDS**.
- 10. Clarification of Bidding Documents
 10.1 A prospective Bidder requiring any clarification of the bidding documents may notify the Employer in writing or by cable ("cable" includes telex and facsimile) at the Employer's address indicated in the invitation to bid. The Employer will respond to any request for clarification received earlier than 14 days prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all purchasers of the bidding documents, including a description of the inquiry, but without identifying its source.
- **11. Amendment of**BiddingDocuments11.1 Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.
 - 11.2 Any addendum thus issued shall be part of the bidding

documents and shall be communicated in writing or by cable to all purchasers of the bidding documents. Prospective bidders shall acknowledge receipt of each addendum by cable to the Employer.

11.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend, as necessary, the deadline for submission of bids, in accordance with ITB Sub-Clause 21.2 below.

C. Preparation of Bids

- 12. Language of Bid
 12.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer shall be written in the language specified in the BDS. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the Bidding Data Sheet, in which case, for purposes of interpretation of the Bid, the translation shall govern.
 13.1 The Bid submitted by the Bidder shall comprise the following:
 - (a) The Form of Bid (in the format indicated in Section III);
 - (b) Bid Security;
 - (c) Priced Activity Schedule;
 - (d) Qualification Information Form and Documents;
 - (e) Alternative offers where invited;

and any other materials required to be completed and submitted by bidders, as **specified in the BDS**.

- 13.2 Bidders bidding for this contract together with other contracts stated in the IFB to form a package will so indicate in the bid together with any discounts offered for the award of more than one contract
- 14. Bid Prices14.1 The Contract shall be for the Services, as described in Appendix A to the contract and in the Specifications, Section VIII, based on the priced Activity Schedule, Section V, submitted by the Bidder.
 - 14.2 The Bidder shall fill in rates and prices for all items of the Services described in the in Specifications (or Terms of

the Bid

Reference), Section VIII and listed in the Activity Schedule, Section V. Items for which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Activity Schedule.

- 14.3 All duties, taxes, and other levies payable by the Service Provider under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the total Bid price submitted by the Bidder.
- 14.4 If **provided for in the BDS**, the rates and prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract in accordance with and the provisions of Clause 6.6 of the General Conditions of Contract and/or Special Conditions of Contract. The Bidder shall submit with the Bid all the information required under the Special Conditions of Contract and of the General Conditions of Contract.
- 14.5 For the purpose of determining the remuneration due for additional Services, a breakdown of the lump-sum price shall be provided by the Bidder in the form of Appendices D and E to the Contract
- 15. Currencies of Bid and the following currencies:Payment15.1 The lump sum price shall be quoted by the Bidder separately in the following currencies:
 - (a) for those inputs to the Services which the Bidder expects to provide from within the Employer's country, the prices shall be quoted in the currency of the Employer's country, unless otherwise **specified in the BDS**; and
 - (b) for those inputs to the Services which the Bidder expects to provide from outside the Employer's country, the prices shall be quoted in up to any three currencies of any member country of the Bank.
 - 15.2 Bidders shall indicate details of their expected foreign currency requirements in the Bid.
 - 15.3 Bidders may be required by the Employer to justify their foreign currency requirements and to substantiate that the amounts included in the Lump Sum are reasonable and responsive to ITB Sub-Clause 15.1.
- **16. Bid Validity** 16.1 Bids shall remain valid for the period **specified in the BDS**.
 - 16.2 In exceptional circumstances, the Employer may request that the bidders extend the period of validity for a specified additional

period. The request and the bidders' responses shall be made in writing or by cable. A Bidder may refuse the request without forfeiting the Bid Security. A Bidder agreeing to the request will not be required or permitted to otherwise modify the Bid, but will be required to extend the validity of Bid Security for the period of the extension, and in compliance with ITB Clause 17 in all respects.

- 16.3 In the case of contracts in which the Contract Price is fixed (not subject to price adjustment), if the period of bid validity is extended by more than 60 days, the amounts payable in local and foreign currency to the Bidder selected for award, shall be increased by applying to both the local and the foreign currency component of the payments, respectively, the factors specified in the request for extension, for the period of delay beyond 60 days after the expiry of the initial bid validity, up to the notification of award. Bid evaluation will be based on the Bid prices without taking the above correction into consideration.
- **17. Bid Security** 17.1 The Bidder shall furnish, as part of the Bid, a Bid Security or a Bid-Securing Declaration, if required, as **specified in the BDS**.
 - 17.2 The Bid Security shall be in the amount **specified in the BDS** and denominated in the currency of the Employer's Country or a freely convertible currency, and shall:
 - (a) at the bidder's option, be in the form of either a letter of credit, or a bank guarantee from a banking institution, or a bond issued by a surety;
 - (b) be issued by a reputable institution selected by the bidder and located in any eligible country. If the institution issuing the bond is located outside the Employer's Country, it shall have a correspondent financial institution located in the Employer's Country to make it enforceable.
 - (c) be substantially in accordance with one of the forms of Bid Security included in Section IX, Contract Forms, or other form approved by the Employer prior to bid submission;
 - (d) be payable promptly upon written demand by the Employer in case the conditions listed in ITB Sub-Clause 17.5 are invoked;
 - (e) be submitted in its original form; copies will not be accepted;
 - (f) remain valid for a period of 28 days beyond the validity

period of the bids, as extended, if applicable, in accordance with ITB Sub-Clause 16.2;

- 17.3 If a Bid Security or a Bid- Securing Declaration is required in accordance with ITB Sub-Clause 17.1, any bid not accompanied by a substantially responsive Bid Security or Bid Securing Declaration in accordance with ITB Sub-Clause 17.1, shall be rejected by the Employer as non-responsive.
- 17.4 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the Performance Security pursuant to ITB Clause 35.
- 17.5 The Bid Security may be forfeited or the Bid Securing Declaration executed:
 - (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Submission Form, except as provided in ITB Sub-Clause 16.2; or
 - (b) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB Clause 34;
 - (ii) furnish a Performance Security in accordance with ITB Clause 35.
- 17.6 The Bid Security or Bid- Securing Declaration of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security or Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent to constitute the JV.
- 18.1 **Unless otherwise indicated in the BDS**, alternative bids shall not be considered.
- 18.2 When alternative times for completion are explicitly invited, a statement to that effect will be **included in the BDS**, as will the method of evaluating different times for completion.
- 18.3 Except as provided under ITB Sub-Clause 18.4 below, bidders wishing to offer technical alternatives to the requirements of the bidding documents must first submit a Bid that complies with the requirements of the bidding documents, including the scope, basic technical data, graphical documents and specifications. In addition to submitting the basic Bid, the Bidder shall provide all information necessary for a complete evaluation of the alternative by the Employer, including calculations, technical

18. Alternative Proposals by Bidders specifications, breakdown of prices, proposed work methods and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer. Alternatives to the specified performance levels shall not be accepted.

- 18.4 When bidders are **permitted in the BDS** to submit alternative technical solutions for specified parts of the Services, such parts shall be described in the Specifications (or Terms of Reference) and Drawings, Section VIII. In such case, the method for evaluating such alternatives will be as indicated in the BDS.
- **19.** Format and 19.1 The Bidder shall prepare one original of the documents comprising the Bid as described in ITB Clause 11 of these Signing of Bid Instructions to Bidders, bound with the volume containing the Form of Bid, and clearly marked "ORIGINAL." In addition, the Bidder shall submit copies of the Bid, in the number specified in the BDS, and clearly marked as "COPIES." In the event of discrepancy between them, the original shall prevail.
 - 19.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to Sub-Clauses 5.3(a) or 5.4(b), as the case may be. All pages of the Bid where entries or amendments have been made shall be initialed by the person or persons signing the Bid.
 - 19.3 The Bid shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.

D. Submission of Bids

- 20.1 The Bidder shall seal the original and all copies of the Bid in 20. Sealing and two inner envelopes and one outer envelope, duly marking the Marking of inner envelopes as "ORIGINAL" and "COPIES". **Bids**
 - 20.2 The inner and outer envelopes shall
 - (a) be addressed to the Employer at the address provided in the BDS:
 - (b) bear the name and identification number of the Contract as defined in the BDS and Special Conditions of Contract;

Bids

Bids

and

- (c) provide a warning not to open before the specified time and date for Bid opening as **defined in the BDS**.
- 20.3 In addition to the identification required in ITB Sub-Clause 20.2, the inner envelopes shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared late, pursuant to ITB Clause 22.
- 20.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.
- 21. Deadline for Submission of21.1 Bids shall be delivered to the Employer at the address specified above no later than the time and date specified in the BDS.
 - 21.2 The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with ITB Clause 11, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.
- **22. Late Bids** 22.1 Any Bid received by the Employer after the deadline prescribed in ITB Clause 21 will be returned unopened to the Bidder.
- 23. Modification and 23.1 Bidders may modify or withdraw their bids by giving notice in writing before the deadline prescribed in ITB Clause 21.Withdrawal of
 - 23.2 Each Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with ITB Clauses 19 and 20, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL," as appropriate.
 - 23.3 No Bid may be modified after the deadline for submission of Bids.
 - 23.4 Withdrawal of a Bid between the deadline for submission of bids and the expiration of the period of Bid validity specified in the BDS or as extended pursuant to ITB Sub-Clause 16.2 may result in the forfeiture of the Bid Security pursuant to ITB Clause 17.
 - 23.5 Bidders may only offer discounts to, or otherwise modify the prices of their bids by submitting Bid modifications in accordance with this clause, or included in the original Bid submission.

E. Bid Opening and Evaluation

24. Bid Opening 24.1 The Employer will open the bids, including modifications made pursuant to ITB Clause 23, in the presence of the bidders' representatives who choose to attend at the time and in the place **specified in the BDS.**

- 24.2 Envelopes marked "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to ITB Clause 23 shall not be opened.
- 24.3 The bidders' names, the Bid prices, the total amount of each Bid and of any alternative Bid (if alternatives have been requested or permitted), any discounts, Bid modifications and withdrawals, the presence or absence of Bid Security, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. No bid shall be rejected at bid opening except for the late bids pursuant to ITB Clause 22; Bids, and modifications, sent pursuant to ITB Clause 23 that are not opened and read out at bid opening will not be considered for further evaluation regardless of the circumstances. Late and withdrawn bids will be returned unopened to the bidders.
- 24.4 The Employer will prepare minutes of the Bid opening, including the information disclosed to those present in accordance with ITB Sub-Clause 24.3.
- **25. Process to Be Confidential** 25.1 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful Bidder is notified of the award. Any effort by a Bidder to influence the Employer's processing of bids or award decisions may result in the rejection of his Bid.
 - 25.2 If, after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Employer, who will provide written explanation. Any request for explanation from one bidder should relate only to its own bid; information about the bid of competitors will not be addressed.
- 26. Clarification of 26.1 To assist in the examination, evaluation, and comparison of bids, the Employer may, at the Employer's discretion, ask any Bidder for clarification of the Bidder's Bid, including breakdowns of the prices in the Activity Schedule, and other information that the Employer may require. The request for clarification and the response shall be in writing or by cable, telex, or facsimile, but no

change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with ITB Clause 28.

- 26.2 Subject to ITB Sub-Clause 26.1, no Bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, he should do so in writing.
- 26.3 Any effort by the Bidder to influence the Employer in the Employer's bid evaluation or contract award decisions may result in the rejection of the Bidder's bid.
- 27. Examination of 27.1 Prior to the detailed evaluation of bids, the Employer will determine whether each Bid (a) meets the eligibility criteria defined in ITB Clause 4; (b) has been properly signed; (c) is accompanied by the required securities; and (d) is substantially responsive to the requirements of the bidding documents.
 - 27.2 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Services; (b) which limits in any substantial way, inconsistent with the bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
 - 27.3 If a Bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.
- 28. Correction of Errors
 28.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Arithmetical errors will be rectified by the Employer on the following basis: if there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected; if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; if there is a discrepancy between the amounts in figures and in words, the amount in words will prevail.

- 28.2 The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid will be rejected, and the Bid Security may be forfeited in accordance with ITB Sub-Clause 17.5(b).
- 29. Currency for Bid Evaluation29.1 The Employer will convert the amounts in various currencies in which the Bid Price, corrected pursuant to ITB Clause 28, is payable (excluding Provisional Sums but including Daywork where priced competitively) to either:
 - (a) the currency of the Employer's country at the selling rates established for similar transactions by the authority **specified** in the BDS on the date stipulated in the BDS;
 - or
 - (b) a currency widely used in international trade, such as the U.S. dollar, **stipulated in the BDS**, at the selling rate of exchange published in the international press as **stipulated in the BDS** on the date **stipulated in the BDS**, for the amounts payable in foreign currency; and, at the selling exchange rate established for similar transactions by the same authority specified in ITB Sub-Clause 29.1 (a) above on the date **specified in the BDS** for the amount payable in the currency of the Employer's country.
- 30. Evaluation and 30.1 The Employer will evaluate and compare only the bids determined to be substantially responsive in accordance with ITB Clause 27.
 - 30.2 In evaluating the bids, the Employer will determine for each Bid the evaluated Bid price by adjusting the Bid price as follows:
 - (a) making any correction for errors pursuant to ITB Clause 28;
 - (b) excluding provisional sums and the provision, if any, for contingencies in the Activity Schedule, Section V, but including Day work, when requested in the Specifications (or Terms of Reference) Section VIII;
 - (c) making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted in accordance with ITB Clause 18; and
 - (d) making appropriate adjustments to reflect discounts or

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other price modifications offered in accordance with ITB Sub-Clause 23.5.

- 30.3 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors, which are in excess of the requirements of the bidding documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in Bid evaluation.
- 30.4 The estimated effect of any price adjustment conditions under Sub-Clause 7.6 of the General Conditions of Contract, during the period of implementation of the Contract, will not be taken into account in Bid evaluation.
- 31. Preference for 31.1 Domestic bidders shall not be eligible for any margin of preference in Bid evaluation.Bidders

F. Award of Contract

- 32. Award Criteria 32.1 Subject to ITB Clause 33, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated Bid price, provided that such Bidder has been determined to be (a) eligible in accordance with the provisions of ITB Clause 4, and (b) qualified in accordance with the provisions of ITB Clause 5.
 - 32.2 If, pursuant to ITB Sub-Clause 13.2 this contract is being let on a "slice and package" basis, the lowest evaluated Bid Price will be determined when evaluating this contract in conjunction with other contracts to be awarded concurrently. Taking into account any discounts offered by the bidders for the award of more than one contract.
- 33. Employer's Right to Accept any Bid and to Reject any or all Bids
 33.1 Notwithstanding ITB Clause 32, the Employer reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer's action.
- 34. Notification of Award and Signing of Agreement
 34.1 The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex, or facsimile confirmed by registered letter from the Employer. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") will state the sum that

the Employer will pay the Service provider in consideration of the execution, completion, and maintenance of the Services by the Service provider as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

- 34.2 The notification of award will constitute the formation of the Contract.
- 34.3 The Contract, in the form provided in the bidding documents, will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and sent to the successful Bidder along with the Letter of Acceptance. Within 21 days of receipt of the Contract, the successful bidder shall sign the Contract and return it to the Employer, together with the required performance security pursuant to Clause 35.
- 34.4 Upon fulfillment of ITB Sub-Clause 34.3, the Employer will promptly notify the unsuccessful Bidders the name of the winning Bidder and that their bid security will be returned as promptly as possible.
- 34.5 If, after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Employer. The Employer will promptly respond in writing to the unsuccessful Bidder.
- 35. Performance Security35.1 Within 21 days after receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance Security in the amount and in the form (Bank Guarantee and/or Performance Bond) stipulated in the BDS, denominated in the type and proportions of currencies in the Letter of Acceptance and in accordance with the General Conditions of Contract.
 - 35.2 If the Performance Security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued either (a) at the Bidder's option, by a bank located in the country of the Employer or a foreign bank through a correspondent bank located in the country of the Employer, or (b) with the agreement of the Employer directly by a foreign bank acceptable to the Employer.
 - 35.3 If the Performance Security is to be provided by the successful Bidder in the form of a Bond, it shall be issued by a surety which the Bidder has determined to be acceptable to the Employer.
 - 35.4 Failure of the successful Bidder to comply with the requirements of ITB Sub-Clause 35.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid

Security.

36. Advance Payment and Security	36.1	The Employer will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to the amount stated in the BDS .
37. Adjudicator	37.1	The Employer proposes the person named in the BDS to be appointed as Adjudicator under the Contract, at an hourly fee specified in the BDS , plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid. If, in the Letter of Acceptance, the Employer has not agreed on the appointment of the Adjudicator, the Adjudicator shall be appointed by the Appointing Authority designated in the Special Conditions of Contract at the request of either party.

Section II. Bidding Data Sheet

Instructions to Bidders Clause Reference

	A. General		
1.1	The Employer is the Municipality of Santa Maria.		
	The name of the Contract is procurement of specialized technical services for aerophotogrammetric survey for the City of Santa Maria – The State of Rio Grande do Sul;		
	The Contract number is ICB: N 002/2011.		
1.2	The Intended Completion Date is 10 (ten) months from the date specified in the Order and Service.		
2.1	The Borrower is the Municipality of Santa Maria.		
	The Project is "Santa Maria 2020 Project"		
	The loan/credit number is 7648-BR .		
4.1	A list of firms that are ineligible to participate in World Bank projects is available at: http://www.worldbank.org/debarr.		
5.2	Not Applicable		
5.3	The Qualification Information and Bidding forms to be submitted are as follows:		
	For companies established in Brazil:		
	I – For <u>Legal Qualification</u> purposes, shall be presented:		
	(a) According to the case: commercial registration, articles of incorporation, bylaws, articles of association or equivalent document;		
	(b) a statement that the bidder has not in its staff employee (s) under 18 (eighteen) years of night work, dangerous or unhealthy and 16 (sixteen) years in any job, except as an apprentice in accordance with Clause XXXIII, Article 7. thereof, of the Constitution. Form as presented in Section III - Bidding Forms.		
	II – For verification of <u>Fiscal Eligibility</u> , must be presented:		
	(a) Proof of enrollment in the National Register of Legal Entity (Juristic Person) (CNPJ);		
	(b) Proof of regularity to the Federal Treasury for the debits of taxes and		

contributions and federal debts of the Union;
(c) Proof of regularity to the State Treasury - Debt Clearance Certificate or positive with negative effects - the domicile or head office or its equivalent under the law.
(d) Proof of regularity to the Municipal Treasury - Debt Clearance Certificate with positive or negative effects - the domicile or head office or its equivalent under the law.
(e) Certificate of regularity to the FGTS .
(f) Proof of regularity to the INSS - certificate of negative charge or positive with negative effects.
III. For verification of Financial Economic Qualification, must be presented:
a) Balance Sheet and Financial Statements of the last three (3) fiscal years, as required and presented according to the law, demonstrating good financial condition;
b) negative certificate of bankruptcy or bankruptcy protection, issued by the distributor's corporate headquarters, or, if applicable, implementing asset, issued in the household of the individual.
IV. In order to verify the Technical Qualification shall be presented:
 (a) Registration of Legal Entity (Juristic Person) Certificate, issued by CREA; (b) Certificate of Professional Registration, also issued or approved by CREA, of the graduated professional responsible for the service. This professional must prove his relationship with the company as follows:
<i>b.1) in the case of associate (s) of the company, should be presented the social contract or equivalent document;</i>
b.2) in case of employee (s), should be presented duly registered work papers;
b.3) in case of a "Contract for Services", should be presented a copy of the contract, notarized or registration with the competent body;
b.4) in any of the cases, should be presented the Bidder (legal entity) Registration Certificate in CREA, if appears the name of the nominated professional in the certificate.

c) Copy of registration in the Defense Ministry in the" A" category, in the terms of Decree 2278 of 7/17/97 and Decree n. 637- SC-62/FA-61 of 03/05/98;

d) Copy of the License given by the ANAC- Civil Aviation National Agency, giving permission for the firm of aerophotogrammetric specialized services to work, as required by Decree n° 5.731 of 03/20/2005;

V. General Provisions:

(a) The documents required in this bid may be submitted in original, authenticated copy of any process by the competent Registry Office or publication in the official press agency;

(b) Bidders may also avail themselves of the Cadastral Registration Certificate (CRC), updated and issued by the City Hall of Santa Maria, as well as the register in SICAF in partial substitution of the requested documents related in this announcement;

(c) If the bidding does not present any document or a document with expired date, the Commission may, at its discretion, proceed query in the Database of the issuer Body, via the internet to check its validity;

(d) not found in the documents submitted its validity, accepted document will be issued within ninety (90) days immediately preceding the date fixed for the opening of the exhibition. Do not fall within in this item the documents which, by their nature, have no expiration date, including the certificates of fitness and technique.

For Foreign Companies:

For Legal Qualifications Purposes shall be presented:

(a) Proof of regular legal existence through document from the country of origin of the bidder, the correlative act of incorporation, statute or social contract in force, duly registered.

(b)A document signed by the bidding company, providing its legal representative in Brazil, person or entity, with powers to receive service and respond administratively and judicially represented by the actions arising from this bid, including signing documents related to this bid. For associates who are managers will be accepted evidence in any of the documents cited in the letter "a" of this item.

I - For the purpose of **Fiscal Eligibility**, shall be presented:

(a) Company name and the registration in the Register of Legal Entities in the country of origin, or equivalent;

(b) Document (s) provided by public institution, which are responsible for taxes on all spheres of government (federal, state, and municipal, or equivalent), the social security contribution and the recollection to fund similar to the guarantee of service time, with date not exceeding 90 (ninety) days, to the extent that required such deposits in the country in which it is constituted the foreign firm,

stating that it is to be regular, with respect to such charges.
(c) Certificate issued by the official institution of the country, with date of issuance not exceeding 90 (ninety) days from the date of the opening session of the envelopes, confirming that the foreign company is not in bankruptcy, receivership, bankruptcy or other institute resembled that may in any way compromise the faithful fulfillment of obligations under the contract.
III. For verification of Financial Economic Qualification shall be presented:
(a) Balance sheet and financial statements, referring to 03 (three) fiscal years, proving the good financial situation of the bidder.
IV - For verification of the Technical Qualification, must be presented:
(A) Certificate of Registration of Legal Entities, issued by CREA (Engineering, Architecture and Agronomy Professional Council);
(B) Certificate of Professional Registration, also issued by CREA (or by this sight, the higher level professional assigned to be responsible for the service, must prove their relationship with the company as follows:
<i>b.1) in the case of</i> associate (s) <i>of the company, should be presented the social contract or equivalent document;</i>
b.2) in case of employee (s), should be presented duly registered work papers;
b.3) in case of a "Contract for Services", should be presented a copy of the contract, notarized or registration with the competent body;
b.4) in any of the cases, should be presented the Bidder (legal entity) Registration Certificate in CREA, if appears the name of the nominated professional in the certificate.
c) Proof of compliance with applicable legislation and the nature of the service commitments of the company's operation in Brazil.
V - General Provisions:
(A) The documents required in this bid may be submitted in original, certified copy of any process by the competent Registry Office or publication in the official press agency;
(B) Bidders may also avail themselves of the Cadastral Registration Certificate (CRC), updated and issued by the City Hall of Santa Maria, as well as the register in SICAF in partial substitution of the requested documents related in this edictal;

	(C) If the bidding does not present any document or a document with expired date, the Commission may, at its discretion, proceed query in the Database of the issuer Body, via the internet to check its validity; The document will be				
	printed and attached to the minutes of the meeting;				
	(D) If in the presented documents do not appear the validity dates, will be accepted document issued up to ninety (90) days immediately preceding the date scheduled for the opening of the event. Do not fall within this item the documents which, by its very nature, do not present term of validity, including with regard to the certificates of technical ability.				
	NOTE 01: WILL BE ACCEPTED DOCUMENTS FROM COUNTRY OF ORIGIN OF THE BIDDER IN REPLACING OF THE THE REQUESTED DOCUMENTS, PROVIDED THAT THEY PROVE THE ABOVE REQUIREMENTS;				
	NOTE 02: IN CASE OF ABSENCE, PROHIBITION OR WAIVER OF DOCUMENTS LISTED ABOVE, WHETHER IN LAW OR LEGAL STANDARD, THE FOREIGN BIDDER SHALL DECLARE AND PROVE THE FACT.				
5.3 (b) and (j)	Not Applicable				
5.5(a)	Annual volume of services of at least 1,755,867.65 USD (one million seven hundred and fifty five thousand, eight hundred sixty seven, and sixty five cents).				
5.5(b)	The Contracts must contain, at least, the following information:				
	-details of the object;				
	-execution time;				
	-value; -data of the issuer (contractor), such as address and telephone number.				
5.5(c)	Not applicable.				
	B. Bidding Data				
9.2 and	In addition to the original proposal should be submitted 01 (a) on physical				
19.1	media copy and 01 (a) a copy in digital media.				
10.1	Clarifications on the Bidding will be conducted by e-mail or registered mail.				
	The request for clarification on the Notice must be received within 05 (five) days from the date fixed for submission of proposals.				
	The deadline for Buyer to respond to requests for clarification will be up to 02 (two) days of the date set for submission of proposals.				

	Only for proposal clarifications purposes, the Buyer is:					
	PREFEITURA MUNICIPAL DE SANTA MARIA					
	COMISSÃO DE LICITAÇÕES DO BANCO MUNDIAL					
	MUNICIPALITY OF SANTA MARIA					
	THE WORLD BANK BIDDING COMMISSION					
	Address: Rua Venâncio Aires, 2277, 2ºAndar, Centro					
	City: Santa Maria (State of Rio Grande do Sul)					
	ZIP Code: 97.010-005					
	Country: Brazil					
	Telephone: +55 55 3921-7100 / +55 55 3921-7250					
	E-mail address: aquisicoesbirdsm@yahoo.com.br					
	C. Preparation of Bids					
12.1	Language of the bid: English					
	"In addition to the above indicated language, these Bidding Documents have been issued in Portuguese					
	Bidders are permitted, at their choice, to submit their bids in one of the two languages above indicated. Bidders shall not submit bids in more than one language. The Contract to be signed with the winning Bidder shall be written in the language in which the Bid was submitted, which will be the language that shall govern the contractual relations between the Purchaser and the winning Bidder. A Bidder shall not sign a translated version of its Contract"					
13.2	Not applicable.					
14.4 and 14.5	Not applicable.					
15.1 (a)	Local inputs shall be quoted in "Real" (Brazilian currency)					
15.1 (b)	Not applicable.					
16.1	The validity of tenders shall be 60 (sixty) days after the deadline for submission of the Bid.					
16.3	Not applicable.					

17.1	The Bidder shall provide: a form as presented in Section III - Bidding Forms.
17.2	The Bid Security will be worth U.S. \$ 90,000.00 (ninety thousand dollars) and will be in the form of:
	a) Bank Guarantee issued by a bank acceptable to the Contractor according to the form presented in Section III - Forms, andb) Bank Guarantee or Irrevocable Letter of Credit issued by a bank located in Brazil and accepted by the Contractor.
	D. Submission of Bids
20.2 (a), (b) and	The Employer's address for the purpose of Bid submission is:
(c)	PREFEITURA MUNICIPAL DE SANTA MARIA
	COMISSÃO DE LICITAÇÕES DO BANCO MUNDIAL
	MUNICIPALITY OF SANTA MARIA
	THE WORLD BANK BIDDING COMMISSION
	Address: Rua Venâncio Aires, 2277, 2ºAndar, Centro
	City: Santa Maria (State of Rio Grande do Sul)
	ZIP Code: 97.010-005
	Country: Brazil
	Telephone: +55 55 3921-7100 / +55 55 3921-7250
	E-mail address: aquisicoesbirdsm@yahoo.com.br
	For identification of the bid the envelopes should indicate:
	Contract: Procurement of Specialized Technical Services for Aerophotogrammetric Survey for the City of Santa Maria – The State of Rio Grande do Sul Bid
	Contract Number: ICB: N 002/2011.
	The outer and inner envelopes will give the following notice:
	"Do not open before: 03/16/2012 – 9:00 a.m. (Brasília Time/GMT -3)."
21.1	The deadline for the submission of bids is:
	Date: 03/16/2012

	Time: 09:00 a.m. (Brasília Time/GMT -3)				
	E. Bid Opening and Evaluation				
24.1	The bid opening shall take place at the following address:				
	Rua Venâncio Aires, nº 2277, 2º Andar, Bairro Centro City: Santa Maria - State of Rio Grande do Sul - Brazil Zip Code: 97.010-005				
	Date: 03/16/2012.				
	Time: 09:00 a.m. (Brasilia time/GMT -3)				
29.1 (a)	Currency chosen for the purpose of converting to a common currency: Brazilian "Real".				
	Source of exchange rate: Central Bank of Brazil				
	Exchange rate date: the day before the opening session of the bid envelopes.				
29.1(b)	Not applicable.				
	F. Award of Contract				
34.3	The Agreement as provided in the bidding documents, will incorporate all agreements between the contractor and the successful bidder. It shall be signed by the contractor and sent to the successful bidder along with the Letter of Acceptance. Within 21 days after receipt of the Contract, the successful bidder will sign the contract and return it to the contractor, together with the required Performance Security, according to Clause 35.				
35.1	The Performance Security acceptable to the Contractor will be 5% of the Contract.				
35.3	Not applicable.				
36.1	Not applicable.				
37.1	To resolve the issues amicably not considered:				
	a) In the case of national companies, is elected as the Forum of Santa Maria, Rio Grande do Sul, Brazil;				
	b) In the case of foreign companies, should be conducted in accordance with the rules and procedures for arbitration of the United Nations Commissions Loaw On International Trade Law (UNCITRAL) in effect on date of this Agreement.				

Section III. Bidding Forms

Table of Forms

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Service Provider's Bid

[date]

To: [name and address of Employer]

Having examined the bidding documents including addenda No, we offer to execute the *[name and identification number of Contract]* in accordance with the Conditions of Contract, specifications, drawings and activity schedule accompanying this Bid for the Contract Price of *[amount in numbers]*, *[amount in words]* [names of currencies].

The Contract shall be paid in the following currencies:

Currency	Amount payable in	Inputs for which foreign currency is
	currency	required
(a)		
(b)		

We accept the appointment of *[name proposed in the Bidding Data Sheet]* as the Adjudicator.

[*or*]

We do not accept the appointment of *[name proposed in the Bidding Data Sheet]* as the Adjudicator, and propose instead that *[name]* be appointed as Adjudicator, whose daily fees and biographical data are attached.

This Bid and your written acceptance of it shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We hereby confirm that this Bid complies with the Bid validity and Bid Security required by the bidding documents and specified in the Bidding Data Sheet.

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Name and address of agent	Amount and Currency	Purpose of Commission or gratuity
(if none, state "none")		

Authorized Signature:	
Name and Title of Signatory:	
Name of Bidder:	
Address:	

Qualification Information

1. Individual Bidders or Individual Members of Joint Ventures	1.1	Constitution or legal status of Bidder: [attach copy] Place of registration: [insert] Principal place of business: [insert] Power of attorney of signatory of Bid: [attach]		
	1.2	Total annual volume of Services performed in five years, in the internationally traded currency specified in the BDS: <i>[insert]</i>		
of Services of a similar nature years. The values should be used for Item 1.2 above. Also I		Services performed as prime Service Provider on the provision of Services of a similar nature and volume over the last five years. The values should be indicated in the same currency used for Item 1.2 above. Also list details of work under way or committed, including expected completion date.		
Project name and country		ame of employerType of ServicesValue of contractd contact personprovided and year of		

(country	and contact person	provided and year of completion
(a)			
(b)			

1.4 Major items of Service Provider's Equipment proposed for carrying out the Services. List all information requested below. Refer also to ITB Sub-Clause 5.4(c).

Item of equipment	Description, make, and age	Condition (new, good, poor) and number	Owned, leased (from whom?), or to be purchased (from
(a)	(years)	available	whom?)
(u)			
(b)			

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data. Refer also to ITB Sub-Clause 5.4(e) and GCC Clause 9.1.

Position	Name	Years of experience	Years of experience
		(general)	in proposed

	position
(a)	
(b)	

1.6 Proposed subcontracts and firms involved. Refer to GCC Clause 7.

Sections of the Services	Value of subcontract	Subcontractor (name and address)	Experience in providing similar Services
(a)			
(b)			

- 1.7 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.
- 1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents. We certify/confirm that we comply with eligibility requirements as per ITB Clause 4.
- 1.9 Name, address, and telephone, telex, and facsimile numbers of banks that may provide references if contacted by the Employer.
- 1.10 Information regarding any litigation, current or within the last five years, in which the Bidder is or has been involved.

Other party(ies)	Cause of dispute	Details of litigation award	Amount involved
(a)			
(b)			

- 1.11 Statement of compliance with the requirements of ITB Sub-Clause 4.2.
- 1.12 Proposed Program (service work method and schedule). Descriptions, drawings, and charts, as necessary, to comply with

the requirements of the bidding documents.

- **2. Joint Ventures** 2.1 The information listed in 1.1 1.11 above shall be provided for each partner of the joint venture.
 - 2.2 The information in 1.12 above shall be provided for the joint venture.
 - 2.3 Attach the power of attorney of the signatory(ies) of the Bid authorizing signature of the Bid on behalf of the joint venture.
 - 2.4 Attach the Agreement among all partners of the joint venture (and which is legally binding on all partners), which shows that
 - (a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
 - (b) one of the partners will be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; and
 - (c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.
- **3. Additional Requirements** 3.1 Bidders should provide any additional information required in the BDS and to fulfill the requirements of ITB Sub-Clause 5.1, if applicable.

Letter of Acceptance

[letterhead paper of the Employer]

[date]

To: [name and address of the Service provider]

This is to notify you that your Bid dated [date] for execution of the [name of the Contract and identification number, as given in the Special Conditions of Contract] for the Contract Price of the equivalent of [amount in numbers and words] [name of currency], as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

Note: Insert one of the 3 options for the second paragraph. The first option should be used if the Bidder has not objected the name proposed for Adjudicator. The second option if the Bidder has objected the proposed Adjudicator and proposed a mane for a substitute, who was accepted by the Employer. And the third option if the Bidder has objected the proposed Adjudicator and proposed the proposed Adjudicator and proposed the proposed the proposed a mane for a substitute, who was not accepted by the Employer.

We confirm that [insert name proposed by Employer in the Bidding Data],

or

We accept that [name proposed by bidder] be appointed as the Adjudicator

or

We do not accept that *[name proposed by bidder]* be appointed as Adjudicator, and by sending a copy of this letter of acceptance to *[insert the name of the Appointing Authority]*, we are hereby requesting *[name]*, the Appointing Authority, to appoint the Adjudicator in accordance with Clause 37.1 of the Instructions to Bidders

You are hereby instructed to proceed with the execution of the said contract for the provision of Services in accordance with the Contract documents.

Please return the attached Contract dully signed

Authorized Signature:	
Name and Title of Signatory:	
Name of Agency:	

Attachment: Contract

Form of Contract

[letterhead paper of the Employer]

LUMP-SUM REMUNERATION

This CONTRACT (hereinafter called the "Contract") is made the [day] day of the month of [month], [year], between, on the one hand, [name of Employer] (hereinafter called the "Employer") and, on the other hand, [name of Service Provider] (hereinafter called the "Service Provider").

[Note: In the text below text in brackets is optional; all notes should be deleted in final text. If the Service Provider consist of more than one entity, the above should be partially amended to read as follows: "...(hereinafter called the "Employer") and, on the other hand, a joint venture consisting of the following entities, each of which will be jointly and severally liable to the Employer for all the Service Provider's obligations under this Contract, namely, [name of Service Provider] and [name of Service Provider] (hereinafter called the "Service Provider").]

WHEREAS

- (a) the Employer has requested the Service Provider to provide certain Services as defined in the General Conditions of Contract attached to this Contract (hereinafter called the "Services");
- (b) the Service Provider, having represented to the Employer that they have the required professional skills, and personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract at a contract price of.....;
- (c) the Employer has received [*or* has applied for] a loan from the International Bank for Reconstruction and Development (hereinafter called the "Bank") [*or* a credit from the International Development Association (hereinafter called the "Association")] towards the cost of the Services and intends to apply a portion of the proceeds of this loan [*or* credit] to eligible payments under this Contract, it being understood (i) that payments by the Bank [*or* Association] will be made only at the request of the Employer and upon approval by the Bank [*or* Association], (ii) that such payments will be subject, in all respects, to the terms and conditions of the agreement providing for the loan [*or* credit], and (iii) that no party other than the Employer shall derive any rights from the agreement providing for the loan [*or* credit] or have any claim to the loan [*or* credit] proceeds;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents shall be deemed to form and be read and construed as part of this Agreement, and the priority of the documents shall be as follows:

- (a) the Letter of Acceptance;
- (b) the Service Provider's Bid

- (c) the Special Conditions of Contract;
- (d) the General Conditions of Contract;
- (e) the Specifications;
- (f) the Priced Activity Schedule; and
- (g) The following Appendices: [*Note:* If any of these Appendices are not used, the words "Not Used" should be inserted below next to the title of the Appendix and on the sheet attached hereto carrying the title of that Appendix.]

Appendix A: Description of the Services

Appendix B: Schedule of Payments

Appendix C: Key Personnel and Subcontractors

Appendix D: Breakdown of Contract Price in Foreign Currency

Appendix E: Breakdown of Contract Price in Local Currency

Appendix F: Services and Facilities Provided by the Employer

Appendix G: Performance Incentive Compensation

- 2. The mutual rights and obligations of the Employer and the Service Provider shall be as set forth in the Contract, in particular:
 - (a) the Service Provider shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) the Employer shall make payments to the Service Provider in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of *[name of Employer]*

[Authorized Representative]

For and on behalf of [name of Service Provider]

[Authorized Representative]

[*Note:* If the Service Provider consists of more than one entity, all these entities should appear as signatories, e.g., in the following manner:]

For and on behalf of each of the Members of the Service Provider

[name of member]

[Authorized Representative]

[name of member]

[Authorized Representative]

Bid Security (Bank Guarantee)

[The Bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

Beneficiary: _____

Date: _____

BID GUARANTEE No.:

We have been informed that ______ (hereinafter called "the Bidder") has submitted to you its bid dated (hereinafter called "the Bid") for the execution of ______ under Invitation for Bids No. ______ ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we ______ hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ______ (_____) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity, (i) fails or refuses to execute the Contract Form; or (ii) fails or refuses to furnish the performance security, if required, in accordance with the Instructions to Bidders.

This guarantee will expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful bidder; or (ii) twenty-eight days after the expiration of the Bidder's Bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s)]

Bid Security (Bid Bond)

[The Surety shall fill in this Bid Bond Form in accordance with the instructions indicated.]

BOND NO.

BY THIS BOND ______ as Principal (hereinafter called "the Principal"), and ______, authorized to transact business in ______, as Surety (hereinafter called "the Surety"), are held and firmly bound unto ______as Obligee (hereinafter called "the Purchaser") in the sum of ______8 _____, for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has submitted a written Bid to the Purchaser dated the _____ day of _____, 20__, for the construction of ______ (hereinafter called the "Bid").

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:

- (a) withdraws its Bid during the period of bid validity specified in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by the Purchaser during the period of Bid validity; (i) fails or refuses to execute the Contract Form; or (ii) fails or refuses to furnish the Performance Security, if required, in accordance with the Instructions to Bidders.

then the Surety undertakes to immediately pay to the Purchaser up to the above amount upon receipt of the Purchaser's first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

The Surety hereby agrees that its obligation will remain in full force and effect up to and including the date 28 days after the date of expiration of the Bid validity as stated in the Invitation to Bid or extended by the Purchaser at any time prior to this date, notice of which extension(s) to the Surety being hereby waived.

IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this _____ day of _____ 20__.

 Principal:
 Surety:

Corporate Seal (where appropriate)

(Signature) (Printed name and title) (Signature) (Printed name and title)

⁸ The amount of the Bond shall be denominated in the currency of the Purchaser's country or the equivalent amount in a freely convertible currency.

Bid-Securing Declaration

[The Bidder shall fill in this Form in accordance with the instructions indicated.]

Date: _____ Bid No.: _____ Alternative No.: _____

То: _____

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with the Purchaser for the period of time of ______ starting on

_____, if we are in breach of our obligation(s) under the bid conditions,

because we:

- (a) have withdrawn our Bid during the period of bid validity specified in the Form of Bid; or
- (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract; or (ii) fail or refuse to furnish the Performance Security, if required, in accordance with the ITB.

We understand this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.

Signed:			_		
In the capacity of:					
Name:			-		
Duly authorized to sign the bid for and	l on beha	lf of:			
Dated on Corporate Seal (where appropriate)	day	of _		 _,	 -

Declaration regarding Child Labor

DECLARATION

[insert bidders company name], registered under CNPJ number [insert CNPJ], through its legal representative, Mr./Ms. [insert full name of Legal Representative], bearer of identification card [insert ID number] and inscribed in the individual roll of taxpayers under [insert CPF number], declares, for all purposes, that does not employ minors under 18 years of age working neither night shifts, in dangerous nor unhealthy conditions and does not employ minors under 16 years of age.

Statement: Employs minors under 14 years of age as apprentice: () YES () NO

Place, __(day)___(month)____(year)____

(signature)

COMMENT: THE FOREIGN BIDDER MUST COMPLETE THIS DECLARATION WITH CORRESPONDING DATA FROM ITS COUNTRY OF ORIGIN.

Section IV. Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement

1. In accordance with Para 1.8 of the Guidelines: Procurement under IBRD Loans and IDA Credits, dated May 2004, the Bank permits firms and individuals from all countries to offer goods, works and services for Bank-financed projects. As an exception, firms of a Country or goods manufactured in a Country may be excluded if:

- Para 1.8 (a) (i): as a matter of law or official regulation, the Borrower's Country prohibits commercial relations with that Country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of the Goods or Works required, or
- Para 1.8 (a) (ii): by an Act of Compliance with a Decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that Country or any payments to persons or entities in that Country.

2. For the information of borrowers and bidders, at the present time firms, goods and services from the following countries are excluded from this bidding:

"No country"

In November of 2003, the World Bank approved revisions to *the Guidelines: Procurement under IBRD Loans and IDA Credits and Guidelines: Selection and Employment of Consultants by World Bank Borrowers.* These guidelines, which became effective in May 2004, contain no obtaining restrictions based on nationality. Providers and consultants from any country are eligible to participate in procurement financed by the Bank for loans or credits for which the invitation to negotiate was issued after 1 May 2004.

Part II – Activity Schedule

Item	Description of Activities	Quantity	Unit	Period/Month									
	Description of Activities	Quantity	Umt	1	2	3	4	5	6	7	8	9	10
1	Planning of activities												
2	Aerophotogrammetric coverage scaled to 1:5000	140	Km ²										
3	Geodesic Vertexes Network installation, materialization and adjustment of planialtimetric coordinate for the Municipality of Santa Maria.	45	Geodesic mark										
4	Cartographic Base Generation scaled to 1:1.000												
4.1	Photogrammetric Support	140	Km ²										
4.2	Aero triangulation			1									
4.3	Stereophotogrammetric Restitution scaled to 1:1.000	140	Km ²										
4.4	Reambulation, Graphic Editing	140	Km ²										
5	Preparation of the Cartographic Base for SIG(shapes)	140	Km ²										
6	Charts generation scaled to 1:1.000, composition and plotting	140	Km ²										
7	Digital ortophoto and ortophotocharts generation scaled to 1:1000; ortophotocharts composition and plotting scaled to 1:1000 and all other plotting	140	Km ²										
8	Qualification and training of the Municipal workers for the handling of the aerophotograms and database in a suitable software	40	Hours										

Section V. Activity Schedule

Part III – Conditions of Contract and Contract Forms

Section VI. General Conditions of Contract

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Section V. General Conditions of Contract

A. General Provisions

1.1 Definitions Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- (a) The Adjudicator is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in Sub-Clause 8.2 hereunder.
- (b) "Activity Schedule" is the priced and completed list of items of Services to be performed by the Service Provider forming part of his Bid;
- (c) "Bank" means the International Bank for Reconstruction and Development, Washington, D.C., U.S.A.;
- or
- (c) "Association" means the International Development Association, Washington, D.C., U.S.A.;
- (d) "Completion Date" means the date of completion of the Services by the Service Provider as certified by the Employer
- (e) "Contract" means the Contract signed by the Parties, to which these General Conditions of Contract (GCC) are attached, together with all the documents listed in Clause 1 of such signed Contract;
- (f) "Contract Price" means the price to be paid for the performance of the Services, in accordance with Clause 6;
- (g) "Dayworks" means varied work inputs subject to payment on a time basis for the Service Provider's employees and equipment, in addition to payments for associated materials and administration.
- (h) "Employer" means the party who employs the Service Provider
- (i) "Foreign Currency" means any currency other than the currency of the country of the Employer;
- (j) "GCC" means these General Conditions of Contract;
- (k) "Government" means the Government of the Employer's country;
- (1) "Local Currency" means the currency of the country of the

Employer;

- (m) "Member," in case the Service Provider consist of a joint venture of more than one entity, means any of these entities;
 "Members" means all these entities, and "Member in Charge" means the entity specified in the SC to act on their behalf in exercising all the Service Provider' rights and obligations towards the Employer under this Contract;
- (n) "Party" means the Employer or the Service Provider, as the case may be, and "Parties" means both of them;
- (o) "Personnel" means persons hired by the Service Provider or by any Subcontractor as employees and assigned to the performance of the Services or any part thereof;
- (p) "Service Provider" is a person or corporate body whose Bid to provide the Services has been accepted by the Employer;
- (q) "Service Provider's Bid" means the completed bidding document submitted by the Service Provider to the Employer
- (r) "SCC" means the Special Conditions of Contract by which the GCC may be amended or supplemented;
- (s) "Specifications" means the specifications of the service included in the bidding document submitted by the Service Provider to the Employer
- (t) "Services" means the work to be performed by the Service Provider pursuant to this Contract, as described in Appendix A; and in the Specifications and Schedule of Activities included in the Service Provider's Bid.
- (u) "Subcontractor" means any entity to which the Service Provider subcontracts any part of the Services in accordance with the provisions of Sub-Clauses 3.5 and 4.
- **1.2 Applicable Law** The Contract shall be interpreted in accordance with the laws of the Employer's country, unless otherwise **specified in the Special Conditions of Contract (SCC).**
- **1.3 Language** This Contract has been executed in the language **specified in the SCC**, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.
- **1.4 Notices** Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex,

telegram, or facsimile to such Party at the address **specified in the SCC.**

- **1.5 Location** The Services shall be performed at such locations as are specified in Appendix A, in the specifications and, where the location of a particular task is not so specified, at such locations, whether in the Government's country or elsewhere, as the Employer may approve.
- **1.6 Authorized Representatives** Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Employer or the Service Provider may be taken or executed by the officials **specified in the SCC.**
- 1.7 Inspection and Audit by the BankBankThe Service Provider shall permit the Bank to inspect its accounts and records relating to the performance of the Services and to have them audited by auditors appointed by the Bank, if so required by the Bank.
- 1.8 Taxes and Duties
 The Service Provider, Subcontractors, and their Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.

2. Commencement, Completion, Modification, and Termination of Contract

- 2.1 Effectiveness of Contract This Contract shall come into effect on the date the Contract is signed by both parties or such other later date as may be stated in the SCC.
- 2.2 Commencement

of Services

- **2.2.1 Program** Before commencement of the Services, the Service Provider shall submit to the Employer for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.
- 2.2.2 Starting Date The Service Provider shall start carrying out the Services thirty (30) days after the date the Contract becomes effective, or at such other date as may be specified in the SCC.
- 2.3 Intended Unless terminated earlier pursuant to Sub-Clause 2.6, the Service Provider shall complete the activities by the Intended Completion Date, as is specified in the SCC. If the Service Provider does not complete the activities by the Intended Completion Date, it shall be liable to pay liquidated damage as per Sub-Clause 3.8. In this case,

the Completion Date will be the date of completion of all activities.

2.4 Modification Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made by written agreement between the Parties and shall not be effective until the consent of the Bank or of the Association, as the case may be, has been obtained.

2.5 Force Majeure

- **2.5.1 Definition** For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.
- **2.5.2 No Breach** of Contract The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.
- 2.5.3 Extension of Time Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.
- **2.5.4 Payments** During the period of their inability to perform the Services as a result of an event of Force Majeure, the Service Provider shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

2.6 Termination

- 2.6.1 By the Employer The Employer may terminate this Contract, by not less than thirty (30) days' written notice of termination to the Service Provider, to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Sub-Clause 2.6.1:
 - (a) if the Service Provider does not remedy a failure in the performance of its obligations under the Contract, within thirty (30) days after being notified or within any further period as the Employer may have subsequently approved in

writing;

- (b) if the Service Provider become insolvent or bankrupt;
- (c) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than sixty (60) days; or
- (d) if the Service Provider, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purposes of this Sub-Clause:

- (i) "corrupt practice"⁹ is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- (ii) "fraudulent practice"¹⁰ is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (iii) "collusive practice"¹¹ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) "coercive practice"¹² is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- (v) "obstructive practice" is
 - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt,

⁹ For the purpose of this Contract, "another party" refers to a public official acting in relation to the procurement process or contract execution. In this context, "public official" includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

¹⁰ For the purpose of this Contract, "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

¹¹ For the purpose of this Contract, "parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

¹² For the purpose of this Contract, "party" refers to a participant in the procurement process or contract execution.

fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

- (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under para. 1.14 (e) of the Bank's Procurement Guidelines.
- 2.6.2 By the Service Provider may terminate this Contract, by not less than thirty (30) days' written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs (a) and (b) of this Sub-Clause 2.6.2:
 - (a) if the Employer fails to pay any monies due to the Service Provider pursuant to this Contract and not subject to dispute pursuant to Clause 7 within forty-five (45) days after receiving written notice from the Service Provider that such payment is overdue; or
 - (b) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- 2.6.3 Suspension In the event that the World Bank suspends the loan or Credit to the Employer, from which part of the payments to the Service Provider are being made:
 - (a) The Employer is obligated to notify the Service Provider of such suspension within 7 days of having received the World Bank's suspension notice.
 - (b) If the Service Provider has not received sums due to by the due date stated in the SCC in accordance with Sub-Clause 6.5 the Service Provider may immediately issue a 14 day termination notice.

2.6.4 Payment Upon termination of this Contract pursuant to Sub-Clauses 2.6.1 or 2.6.2, the Employer shall make the following payments to the Termination Service Provider:

- (a) remuneration pursuant to Clause 6 for Services satisfactorily performed prior to the effective date of termination;
- (b) except in the case of termination pursuant to paragraphs (a),(b), (d) of Sub-Clause 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the

Contract, including the cost of the return travel of the Personnel.

3. Obligations of the Service Provider

3.1 General The Service Provider shall perform the Services in accordance with the Specifications and the Activity Schedule, and carry out its obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The Service Provider shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Employer, and shall at all times support and safeguard the Employer's legitimate interests in any dealings with Subcontractors or third parties.

3.2 Conflict of Interests

in **Project**

- 3.2.1 Service The remuneration of the Service Provider pursuant to Clause 6 shall constitute the Service Provider's sole remuneration in Provider connection with this Contract or the Services, and the Service Not to Provider shall not accept for their own benefit any trade **Benefit** commission, discount, or similar payment in connection with from activities pursuant to this Contract or to the Services or in the Commissio ns and discharge of their obligations under the Contract, and the Service Provider shall use their best efforts to ensure that the Personnel, any **Discounts.** Subcontractors, and agents of either of them similarly shall not receive any such additional remuneration.
- 3.2.2 Service Provider agree that, during the term of this Contract and after its termination, the Service Provider and its affiliates, as well as any Subcontractor and any of its affiliates, shall be disqualified from providing goods, works, or Services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.
- 3.2.3 Prohibition Neither the Service Provider nor its Subcontractors nor the Personnel shall engage, either directly or indirectly, in any of the following activities:
 - (a) during the term of this Contract, any business or professional activities in the Government's country which would conflict

with the activities assigned to them under this Contract;

- (b) during the term of this Contract, neither the Service Provider nor their Subcontractors shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract;
- (c) after the termination of this Contract, such other activities as may be **specified in the SCC.**
- **3.3 Confidentiality** The Service Provider, its Subcontractors, and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer's business or operations without the prior written consent of the Employer.
- 3.4 Insurance to be Taken Out by the Service Provider
 Provider
 The Service Provider (a) shall take out and maintain, and shall cause any Subcontractors to take out and maintain, at its (or the Subcontractors', as the case may be) own cost but on terms and conditions approved by the Employer, insurance against the risks, and for the coverage, as shall be specified in the SCC; and (b) at the Employer's request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums have been paid.
- 3.5 Service The Service Provider shall obtain the Employer's prior approval in writing before taking any of the following actions: Actions
 - (a) entering into a subcontract for the performance of any part of the Services,
 - (b) appointing such members of the Personnel not listed by name in Appendix C ("Key Personnel and Subcontractors"),
 - (c) changing the Program of activities; and
 - (d) any other action that may be **specified in the SCC.**
- **3.6 Reporting Obligations** The Service Provider shall submit to the Employer the reports and documents specified in Appendix B in the form, in the numbers, and within the periods set forth in the said Appendix.
- 3.7 Documents
 Prepared by the Service
 Provider to Be the Property of the Employer
 All plans, drawings, specifications, designs, reports, and other documents and software submitted by the Service Provider in accordance with Sub-Clause 3.6 shall become and remain the property of the Employer, and the Service Provider shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to the Employer, together with a

Requiring

Employer's Prior Approval

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detailed inventory thereof. The Service Provider may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be **specified in the SCC**.

3.8 Liquidated Damages

- 3.8.1 Payments of Liquidated Damages The Service Provider shall pay liquidated damages to the Employer at the rate per day stated in the SCC for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC. The Employer may deduct liquidated damages from payments due to the Service Provider. Payment of liquidated damages shall not affect the Service Provider's liabilities.
- **3.8.2 Correction** for Overpayment If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Service Provider by adjusting the next payment certificate. The Service Provider shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in Sub-Clause 6.5.
- **3.8.3 Lack of performance penalty** If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, a penalty for Lack of performance will be paid by the Service Provider. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as described in Sub-Clause 7.2 and **specified in the SCC.**
- 3.9 Performance Security The Service Provider shall provide the Performance Security to the Employer no later than the date specified in the Letter of acceptance. The Performance Security shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The performance Security shall be valid until a date 28 days from the Completion Date of the Contract in case of a bank guarantee, and until one year from the Completion Date of the Contract in the case of a Performance Bond.

4. Service Provider's Personnel

4.1 Description of PersonnelThe titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Service Provider's Key Personnel are described in Appendix C. The Key Personnel and Subcontractors listed by title as well as

by name in Appendix C are hereby approved by the Employer.

4.2 Removal and/or Replacement of Personnel

- (a) Except as the Employer may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Service Provider, it becomes necessary to replace any of the Key Personnel, the Service Provider shall provide as a replacement a person of equivalent or better qualifications.
 - (b) If the Employer finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Service Provider shall, at the Employer's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Employer.
 - (c) The Service Provider shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

5. Obligations of the Employer

- **5.1 Assistance and** Exemptions The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider such assistance and exemptions as specified in the SCC.
- 5.2 Change in the Applicable Law If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the Services rendered by the Service Provider, then the remuneration and reimbursable expenses otherwise payable to the Service Provider under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred to in Sub-Clauses 6.2 (a) or (b), as the case may be.
- **5.3 Services and Facilities** The Employer shall make available to the Service Provider the Services and Facilities listed under Appendix F.

6. Payments to the Service Provider

6.1 Lump-Sum Remuneration The Service Provider's remuneration shall not exceed the Contract Price and shall be a fixed lump-sum including all Subcontractors' costs, and all other costs incurred by the Service Provider in carrying out the Services described in Appendix A. Except as provided in Sub-Clause 5.2, the Contract Price may only be increased above the amounts stated in Sub-Clause 6.2 if the Parties have agreed to additional payments in accordance with Sub-Clauses 2.4 and 6.3.

- **6.2 Contract Price** (a) The price payable in local currency is set forth in the SCC.
 - (b) The price payable in foreign currency is set forth in the SCC.
- 6.3 Payment for Additional
 Services, and Performance Incentive
 6.3.1 For the purpose of determining the remuneration due for additional Services as may be agreed under Sub-Clause 2.4, a breakdown of the lump-sum price is provided in Appendices D and E.
 - **Compensation** 6.3.2 **If the SCC so specify,** the service provider shall be paid performance incentive compensation as set out in the Performance Incentive Compensation appendix.
- 6.4 Terms and Conditions of Payment
 Payments will be made to the Service Provider according to the payment schedule stated in the SCC. Unless otherwise stated in the SCC, the advance payment (Advance for Mobilization, Materials and Supplies) shall be made against the provision by the Service Provider of a bank guarantee for the same amount, and shall be valid for the period stated in the SCC. Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Service Provider have submitted an invoice to the Employer specifying the amount due.
- 6.5 Interest on Delayed PaymentsBelayed PaymentsIf the Employer has delayed payments beyond fifteen (15) days after the due date stated in the SCC, interest shall be paid to the Service Provider for each day of delay at the rate stated in the SCC.
- 6.6 Price
 Adjustment
 6.6.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the SCC. If so provided, the amounts certified in each payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:

$P_c = A_c + B_c Lmc/Loc + C_c Imc/Ioc$

Where:

 P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency "c".

 A_c , B_c and C_c are coefficients specified in the SCC, representing: A_c the nonadjustable portion; B_c the adjustable portion relative to labor costs and C_c the adjustable portion for other inputs, of the Contract Price payable in that specific currency "c"; and Lmc is the index prevailing at the first day of the month of the corresponding invoice date and Loc is the index prevailing 28 days before Bid opening for labor; both in the specific currency "c".

Imc is the index prevailing at the first day of the month of the corresponding invoice date and Ioc is the index prevailing 28 days before Bid opening for other inputs payable; both in the specific currency "c".

If a price adjustment factor is applied to payments made in a currency other than the currency of the source of the index for a particular indexed input, a correction factor Zo/Zn will be applied to the respective component factor of pn for the formula of the relevant currency. Zo is the number of units of currency of the country of the index, equivalent to one unit of the currency payment on the date of the base index, and Zn is the corresponding number of such currency units on the date of the current index.

- 6.6.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.
- 6.7 Dayworks6.7.1 If applicable, the Daywork rates in the Service Provider's Bid shall be used for small additional amounts of Services only when the Employer has given written instructions in advance for additional services to be paid in that way.
 - 6.7.2 All work to be paid for as Dayworks shall be recorded by the Service Provider on forms approved by the Employer. Each completed form shall be verified and signed by the Employer representative as indicated in Sub-Clause 1.6 within two days of the Services being performed.
 - 6.7.3 The Service Provider shall be paid for Dayworks subject to obtaining signed Dayworks forms as indicated in Sub-Clause 6.7.2

7. Quality Control

7.1 Identifying DefectsThe principle and modalities of Inspection of the Services by the Employer shall be as indicated in the SCC. The Employer shall check the Service Provider's performance and notify him of any Defects that are found. Such checking shall not affect the Service

7.2 Correction of

Lack of

Defects. and

Performance Penalty Provider's responsibilities. The Employer may instruct the Service Provider to search for a Defect and to uncover and test any service that the Employer considers may have a Defect. Defect Liability Period is as **defined in the SCC**.

- (a) The Employer shall give notice to the Service Provider of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.
 - (b) Every time notice a Defect is given, the Service Provider shall correct the notified Defect within the length of time specified by the Employer's notice.
 - (c) If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, the Service Provider will pay this amount, and a Penalty for Lack of Performance calculated as described in Sub-Clause 3.8.

8. Settlement of Disputes

- 8.1 Amicable Settlement The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.
- 8.2 Dispute Settlement
 8.2.1 If any dispute arises between the Employer and the Service Provider in connection with, or arising out of, the Contract or the provision of the Services, whether during carrying out the Services or after their completion, the matter shall be referred to the Adjudicator within 14 days of the notification of disagreement of one party to the other.
 - 8.2.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.
 - 8.2.3 The Adjudicator shall be paid by the hour at the rate **specified in the BDS and SCC**, together with reimbursable expenses of the types **specified in the SCC**, and the cost shall be divided equally between the Employer and the Service Provider, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision will be final and binding.
 - 8.2.4 The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in

the place shown in the SCC.

8.2.5 Should the Adjudicator resign or die, or should the Employer and the Service Provider agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Service Provider. In case of disagreement between the Employer and the Service Provider, within 30 days, the Adjudicator shall be designated by the Appointing Authority **designated in the SCC** at the request of either party, within 14 days of receipt of such request.

Section VII. Special Conditions of Contract

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.1	The words "in the Government's country" are amended to read "in <i>Brazil</i> ."
1.1(e)	The contract name is: Procurement of specialized technical services for aerophotogrammetric survey for the City of Santa Maria – The State of Rio Grande do Sul Bid Contract Number: ICB: N 002/2011.
1.1(h)	The Employer is Municipality of Santa Maria.
1.1(l)	The local currency will be in Brazilian currency (Real);
1.2	The Applicable Law is: from the Federative Republic of Brazil.
1.3	The language is:
1.4	PREFEITURA MUNICIPAL DE SANTA MARIA COMISSÃO DE LICITAÇÕES DO BANCO MUNDIAL MUNICIPALITY OF SANTA MARIA THE WORLD BANK BIDDING COMMISSION Address: Rua Venâncio Aires, 2277, 2°Andar, Centro City: Santa Maria (State of Rio Grande do Sul) ZIP Code: 97.010-005 Country: Brazil Telephone: +55 55 3921-7100 / +55 55 3921-7250 E-mail address: aquisicoesbirdsm@yahoo.com.br Service Provider:
1.6	Facsimile: The Authorized Representatives are: For the Employer:

GC Clause	of Contract
	For the Service Provider:
2.1	The date on which this Contract shall come into effect is when the contract is signed.
2.2.2	The Starting Date for the commencement of Services is the date specified in the Service Order
2.3	The Intended Completion Date is ten (10) months from the date specified in the Service Order.
3.3	Activities prohibited after termination of this Contract are: to disclose proprietary or confidential information regarding the Project, the Services, this Agreement or the operations or activities of the CONTRACTOR without the prior CONTRACTOR in writing.
3.4	Insurance against risk and for the coverage of:
	 (a) Public liability insurance against third parties; (b) the employer's liability insurance for accidents at work of employees and subcontractors in accordance with the provisions of applicable law; (c) Insurance against loss or damage to equipment or property used in performing the Services.
3.6	According to the execution schedule.
3.8.1	The liquidated damages rate is 0,05% of the contract price per day
	The maximum amount of liquidated damages for the whole contract is 1% percent of the final Contract Price.
3.8.3	The percentage to be used for the calculation of Lack of performance Penalty(ies) is 10% of the price of the damage.
3.9	The Execution guarantee must be of 5% of the global contract value.
6.2	The amount in local currency is
6.3.	Not applicable.
6.4	• Deadlines and Terms of Payment:
	 (a) 10% (ten percent) of the Contract Price will be paid upon delivery of products related phases "Aerophotogrammetric Coverage" and "Implementation of the geodetic network." (b) 40% (forty percent) of the lump will be paid upon delivery of

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	products related phases "Photogrammetric Support", "aerotriangulation" and "aerophotogrammetric restitution."
	(c) 30% (thirty percent)) of the lump will be paid upon delivery of products related phases "Reambulation and Graphic Design", "Preparation of Base Cartography", "Generation of Letters" and "Generation of orthophotos."
	(d) 20% (twenty percent) of the lump will be paid upon delivery of the final report and implementation of training. The delay period after which payment the Contractor shall pay interest the Service Provider will be 15 (fifteen) days after delivery and acceptance of service.
	In case of default of the Contractor will use the National Index of Consumer Prices-IPCA, calculated and released by the IBGE.
6.5	If the Contractor has delayed payments beyond fifteen (15) days after the due date, interest shall be paid to the Servicer for each day of delay.
	In case of default of the Contractor will use the "Índice de Preços ao Consumidor Amplo" National Index of Consumer Prices (IPCA), calculated and released by the IBGE.
6.6.	Not Applicable
6.7	Not Applicable
7.1	The principle and modalities of inspection of the Services by the Employer are as follows:
	"All services should be performed in accordance with Decree n°1.77 of June 21/1971, under the regulation of Decree n°2.278 of July 17/1997 and all pertaining legislation.
	Only the mapping (and its respective products) which satisfy the precision specifications for a Class A chart, defined on Decree n°89.817 of June 20/1984 shall be accepted."
	The Defects Liability Period is 5 years.
8.2	To resolve the issues amicably not considered:
	a) In the case of national companies, is elected as the Forum of Santa Maria, Rio Grande do Sul, Brazil;

Number of	Amendments of, and Supplements to, Clauses in the General Conditions
GC Clause	of Contract
	b) In the case of foreign companies, should be conducted in accordance with the rules and procedures for arbitration of the United Nations Commissions Loaw On International Trade Law (UNCITRAL) in effect on date of this Agreement.

Section VIII. Performance Specifications and Drawings

(Describe Outputs and Performances, rather than Inputs, wherever possible)

TECHNICAL SPECIFICATIONS FOR THE PERFORMANCE OF SERVICES SPECIALIZED IN AEROPHOTOGRAMMETRIC DATA SURVEY FOR THE MUNICIPALITY OF SANTA MARIA– RS

1-Objective

The objective of this document is to establish rules, criteria and technical specifications for the performance of technical services specialized in aero photogrammetric survey scaled to 1:1000, covering an area of 140 square km. These services shall be performed according to the best technique and price available in order to achieve the best final product with maximum quality in its various phases of implementation.

2-Localization

Area where the aero photogrammetric survey will take place

- a) Total urban area of the 1st District Headquarters of the municipality of Santa Maria-RS;
- b) Two urban areas situated in rural regions, which are part of Boca do Monte and Pains districts (Annex I)

3-Services to be performed

This document aims to hire aero surveys engineering services, involving the following activities: The objective of this document is to contract the services of aero survey engineers who will perform the following activities:

- a) Planning activities;
- b) Aero photogrammetric Survey;
- c) Geodetic network deployment;
- d) Generation of Cartographic base in the scale 1: 1.000:
 - Photogrammetric support;
 - Aero Triangulation;
 - Digital Stereo Photogrammetric Restitution;
 - Identification, editing and preparation of the Cartographic Base for the SIG;
 - Creation of Charts;
- e) Creation of Orthophoto and Orthophotocharts scaled to 1:1000;
- f) Qualification and Training of municipal workers, focused on manipulating digital and physical of aero photo grams, orthophotograms and orthophoto charts, database, implementation of software suitable for handling Aero photo grams, orthophotos and orthophotocharts. The possibility of training such individuals in the task of the handling

of such documents in the ArcGis software will also be contemplated. This will enable a future development of services and activities performed by the offices of the City Hall of Santa Maria-RS;

g) Other services that involve the completion of contracted work.

4-Technical Specifications

The following technical specifications shall be observed by the contractor in the execution of the services. These specifications will also be applicable wherever needed, according to the present rules and regulations for each stage of the work, as to guarantee the precision and quality of the services performed. More specifically, the contracted firm shall observe the following legislation:

- Decree 1177 of 06/21/71- Refers to aero survey within Brazilian territory;
- Decree 243 of 02/28/67- Establishes rules and bases for the National cartography and complementary legislation;
- Decree 2278 of 07/17/97- RAA- Regulates Decree 1177 of 06/21/71 that refers to aero survey within the Brazilian territory;
- Decree 637- Section 6, pg 61 of 03/05/98- IRA- Approves the Regulatory Instructions for aero survey within the Brazilian territory;
- RPR22 of 07/21/1983- IBGE- Specifications and General Norms for Geodesic Survey within the Brazilian territory;
- RPR 1/2005-IBGE- Changes the characterization of the Brazilian Geodesic System into SIRGAS- Geocentric Reference System for the Americas;
- NBR 14166, of 09/30/1998 Describes procedures for the deployment of networks Municipal Cadastral Reference;
- Decree 89317 of 06/20/84 Regulatory Instructions of the Brazilian Cartography Technical Norms concerning its accuracy patterns;
- Decree 5334 of 01/06/2005- Rewords Art. 21 and revokes Art. 22 of Decree 89317 of 06/20/1984, that establishes the Regulatory Instructions of the National Cartography Technical Norms;

All the surveys and mappings which represent the object of this document should make use of the following references:

a) Geodesic System: Geocentric Reference System for the Americas (SIRGAS 2000);

b) Vertical Data: Oceanographer of Imbituba, Santa Catarina.

c) Projection System; Universal Transverse Mercator (UTM).

4.1 Planning of Activities

It should consist of a work plan which contains the description of the necessary logistics support for the implementation of the project; the development methodology; a project management model along with a general organogram and a specific chronogram of each module and its stages and activities. Within the planning of activities, appropriate actions will be taken together with the Ministry of Defense as to the execution of the aero photogrammetric services and the mobilization of personnel involved in the project, among others.

4.2 Aerophotogrammetric Covering

The aerophotogrammetric covering should be made on a scale of 1:5000 for color aerial photos (aerophotograms), within an area of approximately 140 Km² defined between the geographic coordinates of 29°54'00"S, 30°15'00"S, 51°00'00"W and 51°18'00"W, according to **ANNEX I** of this document. This activity will be performed with an analog or digital camera.

4.2.1 Aerophotogrammetric Covering using an analog aerophotogrammetric camera (film)

a) Flight Plan : The taking of 1:5,000 scale aerial photographs will obey the flight plan in accordance to the agreement defined in this publication and will be planned and presented by the proponent (contractor) along with the technical proposal. The flight plan shall include all grounds where the photos will be taken and in case it differs from what has been presented in this document it will only be approved after being reviewed and approved by the technicians of the Santa Maria City Hall. The flight plan should include, necessarily, the following information:

- Flight zone and its identification according to Annex I of this document;
- Orientation of the flight zones;
- The centers of the photos;
- Preliminary localization of the necessary control sites for the the aerotriangulation phase;
- Coordinates of the polygon encircling the block(s);

The flight zones shall be indicated by a vector whose extremes should coincide with both start and finish points of the photo shoots. A different vector indicating the direction of each flight zone should be used from a point situated before its beginning and another after its end. A Specific program should be used for the planning of the aerophotogrammetric flight.

- b) **Execution of the aero photogrammetric coverage (photogrammetric flight)**: The flight should be performed according to the following quality parameters. The CONTRACTOR shall not accept photos originated from hired flight when any of the following required conditions are lacking:
- The aerial photos shall be taken in clear and cloudless days;

- The flight zones should be planned and executed in blocks, indicating the predominant direction of the flight (east- west or north –south) in order to decrease the necessary photogrammetric support and consequently the amount of field work it takes to implement it. This precaution will also facilitate future processes of cartography production and digital orthophotos;
- The longitudinal superposition of the photos should not be less than 60%, ± 3%;
- The lateral superposition of the photos should not be less than 30%, ± 3%;
- The orientation of the flight zones should be such that it should make it possible to diminish the total zone to be covered;
- The difference between the programmed scale and the effectively achieved scale should not be more than 5%;
- The sun should be more than 30° of inclination with the horizon line for plain regions and more than 50° for mountainous regions;
- The drift angle: medium tolerance per zone is at maximum 2°, and in isolated cases at 5°;
- Verticality of the optical axis: medium tolerance per zone is at maximum 2°, and in isolated cases at 3°;
- The photos should be clear and sharp in details, uniform in brightness and contrast. They should be free of clouds, clouds' shadows, bright zones and static marks;
- The photos should not present zones of specular reflection from the sun or any other type of artifice which may hamper their use in cartographic purposes;
- There should not be "hot spots," be it by the position of the sun or any other factor which may cause their occurrence;
- There should not be very dark areas or excess of light;
- The non use of the appropriate filter for the reduction of the effects of dense fog and vignette;
- The occurrence of trailing above 10 micron in the scale of the photo due to the non use of FMC (Forward Motion Compensation), which is specifically meant to avoid it, or ;
- If not using of FMC, the speed of the flight will be permitted to be such that, combined with the duration of the exposure and the altitude of the flight, the occurrence of the trail will be deterred;

The photos rejected by the CONTRACTOR for not having observed the conditions above should be redone by the contracted, without additional costs with sufficient superposition of the photos in relation to the remaining photos in order to guarantee a continuous stereoscopic coverage.

c) Preparatory activities and for the execution of the flight: It is the responsibility of the contracted firm to coordinate all the necessary activities for the execution of the flight, before, during and after its performance, as follows:

- Preparation of de aircraft(s);
- Installation of the photogrammetric instruments in the aircraft(s);
- Mobilization of the crew and support personnel necessary for the work performance ;
- All the necessary logistics for the development of the work;
- Transportation of technical personnel to and from the work area;
- Lodging and maintenance costs of all personnel in the work area for the duration of the work;
- The necessary fuel for the execution of the flight.
 - c) Aircraft: The aircraft, specially adapted for the taking of aerial photos, should be equipped with an automatic aerophotogrammetric camera, automatic pilot, a NAVSTAR-GPS satellite tracking system for the flight guidance and sufficient autonomy to photograph, at least, two full rolls of film (152 m) and return to base with leftover fuel. The navigation should be done through the GPS (Global Positioning System) such as: CCNS4, ASCOT or T-FLIGHT which may offer the following possibilities:
 - High precision navigation (better than ± 5m of diversion in relation to the projected centers in the flight plan);
 - Automatic estimate of the drift and speed/ altitude;
 - Automatic record of the positions of each photo center;
 - Cinematic GPS;
 - Calculation of photo centers (coordinates);
 - Flight report in the digital format for further adjustments and evaluation.

e) Aerial Camera: The photogrammetric camera should use a wide angular cone with a preset focal distance of approximately 153 mm, a format of 23×23 cm, installed in such a way that the lens will not be sprinkled with oil or sunshine reflexes . The lens should be of high quality in accordance with the services to be performed. It should have the capability of capturing the minimal details without distortion. It should admit at least 125 lines per mm in the center of the lens and a distortion inferior to ± 0.01 mm. There should be the following accessories: Special filters for color panchromatic pictures, electronic exposure reader and spare interchangeable magazines. It should have an automatic mechanism of compensation for the dragging of images (FMC), an automatic control for recovery and drift angle, a GPS navigation system, frame with stabilized rotation suspension and an automatic dispositive which will enable the registration of the coordinates of the center of the photo at the moment of the taking.

f) Film: The film to be used should be of a stable base (polyester), panchromatic, colored, with high resolution power (125 lines per mm), with, at least, 0.004" thick. The validation date by the maker should be observed.

During the flight, the following points should be taken into consideration:

- The extremes of the roll (of film) within a length of at least 2m each should not be photographed;
- The film strips should always be separated by a blank film extension, the equivalent of at least one picture;
- Cutting of the film should be avoided except in rare cases where there is the possibility that part of the film has already been exposed;
- The film should be developed within a period of maximum 10 days after exposure;
- After being used, the films should be stored in their entirety, including the parts which have been exposed and rejected, in temperature and humidity controlled environment;

g) Development of the film and the making of aerial pictures: The film processing and all its sub products should be done in laboratory with controlled temperature and humidity and equipment that provide filtered and pressurized water in all faucets. All chemical products should be stored and mixed in containers which will not cause contamination. The development process can be automatic or manual. In any case, the technical means utilized should guarantee films with uniform density and the absence of: halos, bright stripes, static electricity marks, stains, streaks, scratches and no signs of wearing. After the film processing, the distance between two opposed fiduciary marks in each negative, should not be more than 0.03% of the original length of calibration.

- h) Picture Copies: The copies should be done in electronic copy machines, using resin coated paper of high quality, semi mate. It should have such graduation as to achieve good contrast. The copies should be uniform in color and density. They should present a level of contrast which will ensure that all details in the negatives will be clearly defined in dark, vibrant and undertone zones. All copies should be cleaned and free of chemicals and debris caused by the handling during the development process. They should be washed carefully in order to eliminate chemicals that may harm the copies durability. All marginal information imprinted in the negatives at the time the pictures were taken should be perfectly legible in the pictures:
 - Picture scale;
 - Calibrated focal distance;
 - Picture number and strip;
 - Fiduciary marks;
 - Name of the CONTRACTOR and of the EXECUTOR;
 - Coordinates of the center of the picture;
 - Photos scale;
 - Scale of the photo index;
 - Localization map.
- i) Digital Images: The digitalization of images or scanning should be done straight from the pictures negatives with a radiometric and geometric treatment of images. A precision photogrammetric scanner with the following technical specifications should be used:
 - Minimum format of 23cm × 23cm;
 - Minimum geometric resolution of 20μm;
 - Minimum radiometric resolution of 24 bits;
 - Nominal precision of 7µm;
 - Maximum pixel size of 20µm.

4.2.2 Aerophotogrammetric coverage using a digital aerophotogrammetric camera frame

- a) Digital aerophotogrammetric camera: A metric digital camera in a big frame should be used. It should be provided with sensors which will enable the simultaneous capture of the following bands: panchromatic (PAN); red, green, blue (R, G,B) and near infra red (NIR). A certificate of calibration of the camera provided by the producer, institution or registered professional should be provided. The certificate should be no older than 5 years. The camera should be provided with a system for the capture of the parameters of exterior orientation of the images with the following precision:
 - Position(x, y, z) of the center of the image better than 20cm (GPS, GNSS);
 - Sensor attitude (K, Φ , ω) with position better than 0.02° (IMU).

b) Flight plan: The contracted firm should present a flight plan for all different connections for approval before the work is initiated. The flight plan should be done in a software integrated to a GPS which will permit;

- Flight planning elaborated with the appropriate software which presents the characteristics of the photogrammetric flight, including geodesic coordinates of the planned shooting centers;
- Manage the photogrammetric flight with navigation in real time guaranteeing that the photo shoots will be taken in the planned positions.

c) Automatic control of the photo shooting: After the flight a text record in the ASCII format should be presented. It should contain the data of the images which include date and hour of the exposition, the coordinates of the projection center of each frame in the SIRGAS system, the project name, direction, identification of the flying zone and the picture number.

d) Flight altitude: The flight altitude should be determined according to the resolution of the image and the focal distance of the camera being used. The average size of the pixel in the GSD (Ground Sample Distance) required for coverings is 16cm and the difference between real and planned altitudes will be tolerated in each zone as long as they don't modify in 10% the size of the planned pixel.

e) Direction of flight zones: It should be East/West or North/South. If by any chance these directions cannot be used, the flight plan should be analyzed and approved by the CONTRACTING party.

f) Coating

Longitudinal: From 60% ± 7%;

Lateral: From 30%to ± 7%.

All delimited zones should have stereoscopic coverage, even those where there may be a change of direction in the flight zones. The stereoscopic pair which will start a new section, in case a flight should be repeated, should be entirely (100%) done with the same pair of the former section. If topographic conditions are present, which may cause the scale to be modified in more than 10%, special care should be taken with the flight plan. In these cases, the flight plan should be analyzed together with the inspection and approved before the execution. When a band crosses with a water mirror, within a considerable extension relative to the photo format, a perpendicular or oblique band should be created so that the images will cover less than 10% of the water mass. In such cases, the specifications of longitudinal and lateral recovery will be set aside and inspected case by case.

- g) Meteorological conditions: The flights should be performed in clear skies where sharp images can be obtained. The area to be photographed should offer normal conditions without clouds or flooded zones. The solar inclination should be higher than 30° from the horizon. The pictures should be taken, preferably in the absence of fog, clouds, mist, drizzle, dust, fire and shadows that cover more than 2% of the picture surface;
- h) Drift: The maximum drift should be less than 10°. The images will be rejected when the average drift of a band is superior to 5°;
- **i)** Aircraft speed: The speed of the aircraft should be such that combined with the exposure time will permit a dragging inferior to 20μ;
- j) Storing the images: The images shall be stored in their raw data in two different digital media;
- k) Flight report: A flight report should be presented with all the items mentioned above included. It should also include the authorization of the Ministry of Defense and AVOEM. This report should be signed by the technician(s) responsible for the project and the captain(s) who executed it;
- I) Photo index: The photo index should be in color, the pictures should be scanned and mounted in strips and then in blocks through digital means. They should be developed in a scale 4 (four) times smaller than the original scale using Semi Gloss paper or similar,

placed in sheets of paper and squared by geographic coordinates through small crosses placed on four corners of the photo index (surveyor's square);

The photo index should have the following information:

- Name of the contractor and contracted firm;
- Scale of the photo index and of the flight;
- Date;
- Geographic North;
- Number of strip and picture;
- Area of coverage;
- Grounds; and
- A map of the area where the shooting will take place.

4.2.3 On Board Reports: The flight analysis charts whose layout should be made by the contracted firm and approved by the contractor, should have the following information:

a) Name of the company responsible for the flight;

- b) Aircraft type and respective prefix;
- c) List of crew names;
- d) Weather forecast for the day when the flight will take place;
- e) Type, model and serial number of the photogrammetric camera;
- f) Focal distance;
- g) Flight time (lapse of time);
- h) License number provided by the Defense Ministry;
- i) Identification number for the approved pictures;
- j) Identification number of the approved pictures:
- k) Identification number of the rejected flight zones;
- I) Identification number of the rejected pictures;
- m) Lateral superposition of each flight zone (minimum, medium, maximum);
- n) Longitudinal superposition of each flight zone (minimum, medium, maximum);
- o) Timing for the beginning and end of each flight zone;
- p) Scale of the Flight zone;

- q) Altitude of the flight;
- r) Height of the flight;
- s) Maximum drift;

4.3 Establishment of the Geodesic Network

As part of the support and coordination of all works performed (cartographic work included)within the Municipality of Santa Maria, the contracted firm should deploy, materialize and adjust a geodesic planialtimetric network consisting of, at least, 45 geodesic marks. It should take into consideration the pre existent geodesic demarcations within the Municipality of Santa Maria which shall be taken into consideration and reused and inserted in the general network. The Network should be integrated into the Brazilian Geodesic System through the stations belonging to the Brazilian Network of Continuous Monitoring (RBMC) or stations such as "Planimetric Stations" SAT established by the IBGE within the Municipality as long as the marks are in perfect condition.

The Cartesian coordinates and Geodesic network demarcations should be determined using GPS receptors with double frequency and should be referred to the SIRGA and SAD69 Brazil/IBGE (2005). The coordinates which refer to the Local Topographic Plan should also be determined in accordance with the specifications of the NBR 14.166. The orthometric altitudes should be determined by the local geoid model, originated from the Level Reference (RN) of the Brazilian Geodesic System.

The topographic and geodesic surveys for the establishment of the Municipal Census Reference Network should observe the specifications contained in the following normative instruments:

a)"Specifications of General Rules for the Geodesic Survey", approved by the Resolution PR n°22 of 07/21/83, of The Brazilian Institute of Geography and Statistics (IBGE) in reference to geodesic surveys of 2nd order which refer to precision geodesic demarcations and the surveys of 3rd order which refer to geodesic demarcations of immediate support and the references of level of immediate support;

b) NBR 13.133, of the Brazilian Association of Technical Norms (ABNT), referring to topographic surveys relative to topographic points (main and secondary).

4.3.1 Materialization of the Geodesic Network: It should observe the following:

a) The planning of the distribution of geodesic vertexes should begin with a data survey within official agencies in order to recognize the existing vertexes and Level References (RRNN) and their localization in the area, according to their studies;

b) The implementation and materialization should be planned in order to guarantee a harmonic distribution in the whole area with the initial density of 1 demarcation every 3(three) km². The distribution of geodesic vertexes should be previously approved by the CONTRACTOR.

c) For the materialization of the vertexes, resistant, armed concrete marks should be built. They should have a 60cm high in pyramidal trunk format.

The base should be square with a 30cm side and the top also square with 18cm side with a bronze top inserted in the middle. The cement base should be made of concrete, square and in the following measurements: 50cm × 50cm and 10cm high, according to Annex III.

d) The geodesic demarcations should be placed in secure places of easy access. They should be buried in elevated places of stable and compact terrain, monumented, preferably in Municipal public areas to be defined together with the CONTRACTOR. The geodesic demarcations placed in areas of flexible pavement will not be accepted.

e) The demarcations should not be placed near Microwave Transmission Stations, radars, high power lines, radio antennas, repetition stations or any other emission device that may intervene with GPS signals. All precautions should be taken to avoid multipath intervention.

f) All the demarcations should have a metallic plate made of bronze at the top with an inscription containing their identification. Their superior face should be convex with a central trench; its identification should be done in low relief with the identification number inserted in mark body with the inscriptions: "protected by law", "name of the executor firm" and "name of the contractor".

g) Pictures of the demarcations should be taken: these pictures should be set in the 'JPG' format with a minimum resolution of 04 megapixels;

h) The study of the demarcations should include information about its characteristics such as: A localization sketch, a descriptive memorial, access itinerary, coordinates and pictures. The access itinerary should start at a place of easy identification and well known in the region such as the City Hall, churches, parks, schools and bridges. The project of the study should be approved by the CONTRACTOR.

4.3.2 Placement of the Planimetric Coordinates: The planimetric coordinates of each demarcation should be determined via satellite positioning using the differential static method. It should make use of a multiple station strategy (a minimum of 3 receptors, and of these, two should be stationed in places belonging to the Brazilian Geodesic System) or make use of the RBCM (Brazilian Network Of Continuous Monitoring). Receptor of GPS of double frequency should be used while observing the following instructions:

a) The tracking time for each vertex should be at minimum 1:30 (one hour and thirty minutes). The tracking time should be enough to solve ambiguities within each constellation of a minimum of

5 (five) satellites that present a good geometric configuration and PDOP (Positional Dilution of Precision) equal or inferior to 5;

b) The satellites to be tracked should have minimal elevations of 15° (fifteen degrees) above the horizon;

c) The centering and leveling of the tracking antenna should be verified before and after each observation session;

d) The measurement of the height of the phase center of the GPS tracking antenna over the demarcation should be verified before and after each observation session, accurately rated in centimeters;

e) The observation assessment, that is, the stretch of time between the recording of consecutive observations should be at most 15 (fifteen) seconds;

f) The data processing observed in the tracking sessions should be done in a computer in a software that makes use of the double phase difference as a solution, ensuring a deviation of equal or inferior to 3 cm on the horizontal and 5 cm on the vertical;

g) The network adjustment should be performed through a program which is specific for GPS network adjustments, thus permitting the propagation of the base stations variance. The network should have a minimum precision of 1:500.000. The adjustment should be approved by the CONTRACTOR.

4.4 Development of a Cartographic Base scaled to 1:1.000

The works for the development of a cartographic base in a 1:1.000 scale will undergo the following phases:

- a) Photogrammetric support;
- b) Aero Triangulation;
- c) Aero Photogrammetric restitution;
- d) Reviewing, Editing and Preparation of the Cartographic Base for SIG;
- e) Chart making;

4.4.1 Photogrammetric support: Should be able to provide the necessary tools for the performance of the aero triangulation and restitution works. In order to satisfy the necessities of the aero triangulation there should be one point HV (horizontal/vertical) for each band model taking under consideration the geographic and regional conditions. The acquisition of the coordinates of the support points should be done using GPS receptors.

The photogrammetric support for the mapping scaled to 1:1000 should be accomplished from the established and adjusted geodesic demarcations. The planimetric and altimetric coordinates of points in the terrain should be well marked and identifiable in the aerial pictures for the photogrammetric operations of aero triangulation. The points of photogrammetric support should be chosen so they will coincide with the natural or artificial irregularities of the ground, such as: bifurcations (of trails and roads), fence crossings, building corners, among others.

In the event that the coordinates of the points necessary for the aerial triangulation cannot be done through the GPS system, they should be done through the classical geodesic methods, such as Total Class 2 Stations, specified in the ABNT9NBR 13.133), with a reading of 1 second. The measurements will be done by irradiation through polygon lines supported and closed in points measured by GPS. The polygon lines should oblige the requirements of the Class II-P of the ABNT-NBR 13.1333, with sufficient precision as to satisfy the mapping scaled to 1:1000, without shaded areas. This should be approved by the CONTRACTOR.

The photogrammetric support of the altimetry points should be chosen so that they will coincide with natural or artificial obstacles on the ground. They should be placed preferably on even ground. They should be clearly defined by geoid difference and the model should be done through RRNN tracking already existing in the region.

4.4.2 Aero Triangulation: The setting of the parameters of external orientation (position and altitude), for framed digital metrical images should be through the technique of aerial triangulation by blocks using Bundle Block Adjustment and adjustment through minimal square method(MMQ) and observe the following specifications:

a) The photogrammetric points of control and support should be measured in a stereoscopic way making use of digital photogrammetrc stations with tridimensional resources (3D);

b) The photogrammetric points should be measured automatically or semi automatically, with improvement through minimal squares thus assuring a sub-pixel precision; The verification of the measured point should use resources of three-dimensional (3D) visualization;

c) Each image should contain at least one well defined photogrammetric point for each Grüber region, totaling at least 09 pts per image;

d) In places of superposition of subsequent photos (stereoscopic models) a photogrammetric point per Grüber region should be measured. It should be well defined totaling, at least, 06 points per stereoscopic model;

e) In regions where there is superposition of adjacent strips, a minimum of 01 point of connection per Grüber region should be inserted, totaling at least 3 points per image in this region;

f) In exceptional cases (incomplete model) a 04 photogrammetric points distributed in the serviceable area of the model, will be acceptable;

g) A visual inspection of the photogrammetric points obtained by correlation (passage and linkage) should be made in order to avoid false associations in shady regions, objects in movement, repetitive patterns and so forth;

h) Whenever possible, it should include photogrammetric points situated at water level of rivers and lakes so that they can be used for control and verification of its compatibility with the normal water flow.

The methods for obtaining the external orientation parameters through direct measurement using GNSS and IMU can be used for helping with triangulation. The final result of these parameters should be duly determined through the techniques of aero triangulation per block, making use of Bundle Block Adjustment and adjustment through the minimal squares method (MMQ) as previously mentioned.

When using the direct measurement method for the external orientation parameters in the aero triangulation adjustment, the following criteria should be observed:

- a) The on board GNSS receptor should allow a collection of data with a minimal frequency of 1 Hz and register the coordinates at the moment of the taking with an error of synchronism of less than .1ms. The Inertial System (INS should have minimal nominal resolution in order to register the rotation of the camera axle with 0.02° precision;
- b) The antenna phase center of the on board INS-GNSS system should be simultaneously tracked from at least 2 (two) GNSS stations of monitoring whose coordinates should mandatorily be determined by the Continuous Monitoring Brazilian Network. The distance between the distances in relation to the antenna phase center should exceed 60 km;
- c) The receptors used in the ground stations for the geographic reference through the Direct Method should have a data collection configuration of less than 1 second.

4.4.2.1 Tolerances: The accepted tolerances for the Aerial triangulation verification shall be analyzed based on the residue of the photogrammetric and support points.

Concerning the support points, the Quadratic Medium error (EMQ) between the coordinates obtained in the Aero triangulation and the coordinates of the respective points on the ground should not be more than the following tolerances:

a) The level ground EMQ in the components X and Y (EMQX, EMQY): EMQX=1.3Ps (Ps being the size of the pixel of the image on the ground) EMQY= EMQ

b) Altimetric Quadratic Medium Error(EMQZ) EMQZ= 1.5 EMQX

These values are estimated for the whole set of support points through the coordinates obtained in the Aerial triangulation and its corresponding values in the field.

As for the photogrammetric points, the result EMQ through the coordinates obtained stereoscopically in the oriented models and the coordinates of their respective points in the field should not be superior to the following tolerances:

a) Level Ground Quadratic Medium Error in the components X and Y (EMQX, EMQY) EMQX= 1.6 Ps

EMQY=EMQX

b) Altimetry Quadratic Error(EMQZ) EMQZ=1.5 EMQX

These values are estimated for the set of photogrammetric points through the coordinates obtained in the Aero triangulation and its respective values obtained in the field. None of photogrammetric points should present a Maximum Error superior to the following tolerances:

a) Level Ground Error for the X and Y components (EmaxX, EmaxY); EmaxX=4.5 Ps

EmaxY= EmaxX

b) Altimetric Error for the Z component(EmaxZ) EmaxZ= 1.5 EmaxX.

4.4.2.2 Quality Verification: For the Aerial triangulation quality control the Contracted firm should give the Aerial triangulation Report to the Contractor. The report should include the points with their respective residuals measured in image space (per photo); guides for external orientation for each picture (position and altitude) with the respective residuals and coordinates of the points obtained on the field.

One point of control should be measured on the field for each one hundred models. There should not be less than 5 points of control within each block. These points should be read in 3D in at least 2 images throughout the process of aerial triangulation. The verification shall be obtained by comparing the coordinates found during the process of aero triangulation to the ones obtained on the field.

The Verification Report should include a comparative chart of the tridimensional coordinates of the photogrammetric points (stereoscopically collected in the models of the photogrammetric station) with the coordinates of the same points obtained on the field. The report should also include the results of the statistical analysis of accuracy and tendency which may attest to the quality of each block according to the quality criteria previously established.

4.5 Digital Stereo Photogrammetric Restitution scaled to 1:1000

The restitution of the area will be done through data records obtained directly from information (magnetic mean) deriving from digital photogrammetric stations. It should contain the record of the coordinates (xyz) in meters with a precision of 2 decimals. The restitution should be performed in a scale of 1:1000 within levels of information in order to facilitate its use in an isolated form or various sets for future use by the Geographic Information System (SIG) and Real State Cadastral Survey.

The linear and polygonal elements represented in the information levels will be delineated making use of point, line and polygon segments. Arches, circles, splines or ellipses will not be permitted.

4.5.1 Elements to be restituted: The elements obtained in the restitution will be gathered in levels of information and represented by traces and /or symbols compatible with the map scale. The symbology will be proposed by the CONTRACTED firm and approved by the CONTRACTOR. The visible elements to be restituted and its correspondent levels of information are located in **Annex II** of this document, besides other elements which may be necessary. All the toponymy should be incorporated in the information level as an attribute.

The restitution, representation and storing of the entities which represent the levels of information of Altimetry, Hydrography (riverheads- permanent- intermittent), Vegetation (forests, riparian forests, woods and isolated trees), Cultivated areas, Road Systems, Building Alignment(Blocks) should follow the specifications below.

4.5.1.1 Altimetry: The Altimetry should be represented by equidistant curves of 1m (1 meter) and equidistant master curves of 5m. The level curves should be topologically closed. It should comprise a specific level of information with the respective altimetric values incorporated as attributes. The points marked through the coordinates (X, Y, Z) should comprise a specific level of information with the respective altimetric. They should be positioned in the following manner:

a) Bifurcation and intersection of street s, end of dead ends streets, avenues, among others;

b)Level Crossing;

- c) Valley bottom;
- d) Gradier change;
- e) Peak elevation;
- f) Depressions;
- g) Level of water in rivers, lakes, ponds and dams;
- h) Channels;
- i) Headwaters of bridges and overpasses;
- j) Storage dams;

k) Slopes;

l) Stone pits.

The marked points should be less spaced out in depressions and valley bottoms. The height of Buildings, towers or antenna s within the Municipal area and which are situated close to the Air Force and Municipal Airports should be marked according to **Annex 13 of the Law of Use and of Occupation of Territory (PDDUA)** of the Municipality of Santa Maria.

4.5.1.2 Hydrography, Vegetation and Cultivated areas: The hydrography (water bodies with its riverheads- permanent –intermittent) should be represented according to the following criteria:

a)The tributary main rivers should be represented by various independent lines showing knots which coincide at the points of confluence with tridimensional coordinates(X,Y,Z);

b)The series of lines which represent lakes, ponds, dams ,water reservoirs and small ponds should have a coincidental vertex at the origin and exit of the water body;

c) The placing of vectors in the hydrography should be done in the direction origin to downstream;

d) The vegetation (forests, riparian forests, woods and isolated trees) should be represented according to the conventional cartographic rules (NBR 13.133);

e) The cultivated areas according to the conventional cartographic rules (NBR 13.333):

4.5.1.3 Road System: The road system consists of: Federal, state and municipal roads (paved or not), Streets (paved or not), pathways, curb, public parks, street axis, footbridges, tunnels, bridges, overpasses, crossings, railways/tracks, and toponymy of the Road System, etc.

4.5.1.4 Building Alignment (Blocks): The blocks can consist of a reunion of lots, parks, or alleyways not necessarily defined by a curb. The data for the building alignment will have the following characteristics:

a) Identification number of the sector;

b) Identification number of the block.

4.5.1.5 Public buildings and buildings of prominence:

- Square parks, Parks and Similar;
- Stadiums, Gymnasiums, Sports courts and Similar;
- Public and Private Schools;
- Public and Private day Nurseries;
- Colleges and Universities;
- Hospitals;
- Cemeteries and Crematoriums;

- Airport, Aero Club and runways;
- Prominence buildings such as Malls, Museums, Theaters, Historical Buildings, Public Buildings, Industrial and Commercial Buildings;

4.5.1.6 Limits:

- Urban Zone Limit of the 1st District Headquarters;
- Limit: Residential Quarters.

4.5.2 Reambulation, editing and base preparation for the SIG

- 4.5.2.1 Reambulation: in order to include in the final prints and archives and as a complementation to the digital restitution works, the following actions should be taken while at the field:
 - a) To classify the natural and artificial geographic relief;
 - b) To complement eventual bright spots due to shadows and photographic dead angles;
 - c) To clear out doubts about invisible details in the photos which may be hard to interpret during restitution;
 - d) To identify lack of details and correct interpretation errors by the operator during restitution;
 - e) To update and complement the general toponomy which was added as an attribute. It should be identified by its official nomenclature;
 - Streets, avenues, squares and all public spaces;
 - Important references or prominent buildings;
 - Federal, state and municipal administration buildings;
 - Roads and railways;
 - Rivers, creeks and lakes. The creeks and rivers that have been channeled should have a specific convention so they can be duly differentiated from those which are not.
 - f) The toponomy (names of streets, squares, rivers, etc.) should be obtained from cartographic documents both located in the municipal offices and on the work field in case such documentation is not enough;

g) The toponomy should be incorporated as an attribute to the referred documents.

4.5.2.2 Editing and Preparation for Cartographic Base for the SIG: The digital archives made during the stereofotogrammetric restitution process will be complemented and corrected taking into account the reambulated data. For complementary information addition or toponomy corrections due to reambulation the same patterns used for the stereophototogrammetric restitution will be used. The Cartographic Base preparation for the SIG should be put into a singular and continuous

archive. The digital archives of the restituted models should be edited according to the following guides:

a) The polygonal entities formed by the polylines, such as lots, squares, central medians, extra legal urban settlements, squares, ponds, lakes, flooded areas, among others. should have analytical closure with the initial and final coordinates numerically identical;

b) For the delimitation of entities not completely physically defined, the requirement for the analytical coincidence of the initial and final coordinates is not required;

c) The polygons that result from the restitution or from the reambulation of the field shall be individually represented;

d) The polylines (common points of objects of a different nature) should coincide analytically and be part of the registration of all entities participating in the coincidence;

e) The adjoining polygons should have the common data analytically coincidental;

f) All planimetric and altimetric details shall be edited in two dimensions (X, Y, Z);

g) All arches and circular or eliptical facets shall be represented by straight line segments with a minimum of necessary vertexes so that in the representational scale they can be visualized as an arch;

h) All facets of the same nature will be structured according to the arch-knot topology;

i) The level curves will form a specific level of information with the respective altimetric values added as attributes;

j) The entire toponomy should be added at the level of information as an attribute that should be supplied by the CONTRACTOR;

k) Levels of information should be created for Altimetry (level curves), Hydrography, Vegetation, Road System, Building Alignment (blocks), Public Buildings, Limits, therefore all data which is part of item **4.5** in this document plus the markings of the geodesic network implanted – **item 4.3.** These items should be developed by the CONTRACTED firm who should take into account data given by the SIG of the Town Offices. The level of the Road System information, for example, should be linked (through attributes) to a set of information and data source such as: public places cadastre, numbers of block buildings from the beginning to the end, street length, and others if necessary.

I) The CONTRACTED firm should develop a methodology for the updating of this level of information which should be approved by the CONTRACTOR.

m) The CONTRACTOR will have at the CONTRACTED firm's disposal a digital archive in the 'SHP' (shape file) format with the levels of information it possesses and which will be updated according to the criteria developed by this methodology.

n) The data storage of the lots will have at least the following characteristics

Identification of the sector number;

• Block identification number;

o) The vectorial archives should be delivered in a continual cartographic base in a DWG format, Shapefile another which the Contracted firm should have at disposal.

4.6 Generation of maps

Digital archives should be articulated and prepared for the plotting of the charts. These archives should be delivered in formats to be defined by the CONTRACTOR.

4.6.1 Generation of Planialtimmetric charts in the Scale of 1:1000: The digital archives that were created from the restitution and with the information levels related to **Annex II** in this document should generate charts scaled to 1:1000. Within each of the charts there should be a standard mask with a layout developed by the CONTRACTED firm and approved by the CONTRACTOR with the following information:

a) Santa Maria Township Coat of Arms and the logotype of the Town Office- Municipal Headquarters;

- b) Inscription: "1° District Urban Area Map– Santa Maria Municipal Headquarters/RS";
- c) Data of the projection System (UTM);
- d) Horizontal and vertical datum;
- e) Graphic and numerical Scales;
- f) Flight Time Lapse;
- g) Dates of Restitution, reambulation and editing;
- h) Page articulation;
- i) A cartographic conventions billboard;
- j) Magnetic declination and date;
- k) Meridian convergence and linear deformation coefficient for the center of the page;
- I) Geographic coordinates for the corners of the page;

m) Reticular UTM (plane and rectangular) coordinates;

n) "Class A" Chart Classification;

o) Photos used in the making of the page: flight, zone and photo numbers;

p) Note: "The PMSM (The Township of Santa Maria) appreciates the information as to any errors or omissions observed on this map";

q) Pages codification numbers: Cartographic Articulation codes in the National Cartographic System;

r) Executor firm;

s) CONTRACTOR firm;

t) Other necessary information;

The plotting should be done in laser or jet print, in color, in a non deforming polyester base of excellent quality, transparent, mate or semi-mate.

4.6.2 Generation of Digital Orthophotos: for the generation of digital orthophotos the following procedures should be observed:

a) The color digital orthophotos scaled to 1:1000 should be generated from the aerial pictures of the aerophotogrammetric survey (scaled to 1:5000).

b) They should be obtained through differential rectification, geometric and radiometric interpolation of the images with a 10cm pixel (on the terrain) in the case of digital camera or a 1.200 dpi scanning for analog cameras.

c) The Terrain Digital Model (MDT) should be obtained from the altimetric elements, restitution of terrain interruptions, and structural lines such as: water dividers, rivers, valley grounds, roads, short cuts, embankments, etc., of the quoted points and the hydrography.

d) The orthoprojection should be done from the digital images of the pictures, of the MDT, and from the aerotriangulation data and the camera calibration parameters data.

e) The geometric correction aimed to eliminate distortions due to the terrain relief and the conic projection of the images shall be done comparing the tridimensional terrain coordinates with those of the plane coordinates of the picture, using the UTM Projection System.

f) The orthorectification will be complemented by radiometric image adjustment with the objective of eliminating light changes between adjacent images and adjust the contrast and tonality of the final product without losing visual information;

g) The orthophotos should be done in mosaic and cut according to articulation to be defined in agreement with the CONTRACTOR.

h) The orthophoto should be delivered in the following format: "GEOTIFF", with the header in the "TFW" format and in another format that utilizes data compression. This compression should allow the high projection images to be stored in relatively small archives without a significant loss of quality. This choice should be approved by the CONTRACTOR;

i) The vectorial archives should be delivered in a continuous cartographic base in "DWG" and "Shapefile" formats.

4.6.3 Orthophotomaps creation scaled to 1: 1000: Through the composition of digital orthophotos, orthophotochart should be generated in a scale of 1:1000. In cases where one orthophotochart contains more than one orthophoto, the mosaics technique should be used so, that a perfect geometric and radiometric coincidence will be guaranteed. A standard mask will be put inside each one of the archives and records with a layout developed by the CONTRACTED firm and approved by the CONTRACTOR with the following information:

a) Santa Maria Township Coat of Arms and the Logotype of the "Town Offices – Municipal Headquarters";

b) Inscription: 1°District Urban Area Map - Santa Maria Municipal Headquarters/RS;

c) Projection System (UTM) data;

- d) Horizontal and vertical datum;
- e) Graphic and numerical Scales;
- f) Flight time lapse;
- g) Dates of restitution, reambulation and editing;
- h) Page articulation;
- i) Magnetic declination and data;
- j) Meridian convergence and linear deformation coefficient for the center of the page;
- k) Geographic coordinates of the page corners;
- I) Reticular UTM (plane and rectangular) coordinates;
- m) "Class A" Classification Chart;

n) Pictures used in the elaboration of the orthophotochart: flight number, zone and pictures number;

o) Pages codification numbers: Cartographic Articulation codes in the National Carthography System;

- p) EXECUTOR firm;
- q) CONTRACTOR firm.

The orthophotochart should be delivered in the following format: "GEOIFF" with the title in the "TFW" format and in another format that makes use of compression data with a cad pattern to be decided between the CONTRACTED firm and the CONTRACTOR. This compression should allow the high projection of images to be stored in relatively small archives without significant quality loss. This choice should be approved by the CONTRACTOR. The plotting should be done in laser or jet print, in color, encapsulating each page for conservation purposes with a resolution of 600 dpi, in photographic paper.

5. PRODUCTS TO BE DELIVERED

The CONTRACTED firm should deliver the products named below at the end of each work phase and elaborated according to specifications on item 4 of this document. The choice of the products digital media should be approved by the CONTRACTOR.

5.1 PLANNING OF ACTIVITIES

a) 01(one) report containing the work plan and the description of the work force mobilization.

5.2 AEROPHOTOGRAMMETRIC COVERAGE

The CONTRACTED firm should give the CONTRACTOR:

- a) A certificate of the aerophotogrammetric camera calibration;
- b) A navigability certificate and a SEGVOO form;

c) 1(one) copy of the Analytical Flight Plan and 1(one) copy of the Graphic Flight Plan over the original of Topographic Maps in the scales pre defined by digital media;

d) On board records and records made by the cameras during the photo shoots, <u>in print and in</u> <u>digital media</u> ("TXT" format);

e) 1(one) set of aerial color pictures in a scale of 1:5000 **printed** on photographic paper semi mate, double weight, of excellent quality, 23cm×23cm, with marginal information. The sets should be delivered duly accommodated in plastic bags or another type of safe and trustable packaging. They should be labeled with the identification number of the strip and the amount of pictures in there as specified;

f) 2(two) **recorded** copies (done in compatible media) of the digital archives of the color aerial photographs, in the scale of 1:5000, in the non compressed "TIFF" format;

g) 2(two) copies of the photo index of the photogrammetric survey in print, scaled to 1:25.000, in photographic and laminated paper, articulated according to the National Cartographic System- SCN (scaled to 1:25.000);

h) 2(two) <u>recorded</u> copies in compatible media (CD or DVD), of the digital archives of the aerophotogrammetric survey photo index with the respective vectorial archive in the format 'Shapefile' and 'DWG' and **raster** images in the 'GEOTIFF'. The header should be in the 'TFW' format;

i) 2(two) recorded copies in compatible media (CD or DVD) of the digital archives of the aerophotogrammetric survey mosaic containing the respective vectorial archive in the 'Shapefile' and 'DWG' formats (individual layers by theme correspondent to the solicited shapes);

j) Final Report with a resume of the works performed in each phase, indicating the methodology, the resources used and any other important information.

5.3 The GEODESIC NETWORK DEPLOYMENT

The CONTRACTED firm should deploy a Geodesic network and present it to the CONTRACTOR:

a) 2(two) copies of the general project of the localization of the marks scaled to 1:25.000, done in digital media (Shapefile and DWG) and in print;

- b) Field work reports, in print and in digital media;
- c) GPS tracking archives of the implanted marks and of the used bases in digital media;
- d) Report of the GPS observation sessions, in print and in digital media;
- e) Report of the gathering of orthometric coordinates from a local geoidal model;

f) Final report of the network adjustment, in print and in digital media;

g) Studies of the implanted marks in print and in digital media ('PDF' format), with the pictures of the implanted marks (in 'JPG' format) and with a minimal resolution of 04 Megapixels; The model of the studies should be similar to the model used by the Brazilian Institute of Geography and Statistics- IBGE and approved by the CONTRACTOR;

h) Final report with a summary of the works performed in each phase, citing the methodology used, the resources and any other information which may be important for the project.

5.4 THE CRIATION OF THE CARTHOGRAPHIC BASE SCALED TO 1:1.000

The products to be delivered by the CONTRACTED firm are as follows:

5.4.1 Photogrammetric support and Aerotriangulation

a) A report of the points and marks used in the work of field support, including supplementary field support, delivered in digital media;

b) Field work report, in print and in digital media;

c) GPS observation sessions Report of the points and marks used as field support;

d) Geometric leveling Report used for the determination of orthometric altitudes of the support points;

e) Coordinates of the points used as field support in print and digital media;

f) Field support and Aerotriangulation Report containing a summary of the works performed on each phase, describing the methodology, resources and other information that may be relevant for the project.

5.4.2 Preparation of the Cartographic Base for SIG

a) 02 (two) recorded copies in compatible media of the continuous digital archive with attributes already specified on item 4.5 of this document, in "Shapefile" format.

5.4.3 Creation of Charts scaled to 1:1000

a) 02(two) **recorded** copies in compatible media of digital archives of the planialtimetric charts scaled to 1.1000, as specified on item 4.5 of this document;

b) 02(two) color **printed** plotting of the planialtimetric charts scaled to 1:1000 articulated according to the National and/ or Municipal Cartographic System as specified on item 4.5 of this document;

c) 02(two) **recorded** copies in compatible midia of the digital archives of the orthophotocharts scaled to 1:1000, as defined on item 4.6;

d) 02(two) color **printed** plotting of the orthophotocharts scaled to 1:1000, in accordance with item
4.6 (the plotting should be in color, in a non deforming polyester base of excellent quality);

e) 02(two) <u>recorded</u> copies in compatible media of orthophotocharts digital archives created during the stereophotogrammetric restitution which contain the levels of information related to **Annex II** of this document and specified on item 4.5 delivered in the "DWG" and "Shapefile" format;

f) 2(two) **recorded** copies in compatible media (CD,DVD), of the digital archives of the color photos, articulated in a pre defined scale of 1:5000, as specified on item 4.6;

5.4.4 The Final Project Report: Final Report with a summary of the works performed on each phase and detailing the methodology, the resources used and any other relevant information.

5.4.5 Qualification and Training: The Contracted firm will be responsible for the qualification and training of the municipal workers, focusing the manipulation of aerophotograms and of the database in software which is suitable for future use as activities unfold.

6 Quality Control:

All services should be performed in accordance with Decree n°1.77 of June 21/1971, under the regulation of Decree n°2.278 of July 17/1997 and all pertaining legislation.

Only the mapping (and its respective products) which satisfy the precision specifications for a Class A chart, defined on Decree n°89.817 of June 20/1984 shall be accepted.

The CONTRACTED firm should use quality control mechanisms in order to avoid inaccurate, inconsistent or wrong information. It should also inform the nature of these mechanisms in its technical proposal.

The CONTRACTOR will supervise all phases of the works directly through its employees or through a contracted 3rd party.

The CONTRACTOR will be able to arrange technical meetings with the CONTRACTED at regular intervals in order to clear up doubts about the services performed and to establish rules of action with the objective of achieving coherence and setting the standard to the procedures thus guaranteeing the quality of the final product.

7 DEADLINE

The deadline for the execution and conclusion of all works should be of 10(ten) months. The deadlines for each phase of the works should be observed from the moment of the Execution Order or a specific chronogram.

8 PROFILE OF THE CONTRACTED FIRM

The contracted firm should be well regarded in the market in the area of cartographic and aero survey engineering. It should present a portfolio works performed which prove an experience in the field of at least 10 years.

The contracted firm should present:

a) A certificate of its registration with the CREA;

b) A certificate of Professional registration with the CREA (or approved by it) of the Graduate level professional responsible for the work. This professional should also prove his link with the Contracted firm in the following manner:

- If he is a partner in the firm, the professional should present a social contract or an equivalent document;

- If he is an employee of the firm he should present a copy of his job license duly registered;

- If he is a sub-contractor, he should present a copy of the contract signed and recognized by a public notary or a registration in a competent public organ;

-in any case, a certificate of registration with the CREA can be presented by the CONTRACTED firm if contains the name of the indicated professional;

c) Proof of Operational Technical Capacity in the name of the bidder firm through a certificate given by a person(s)/entity(s)/firm public or private duly verified or certified by CREA proving it has already done similar jobs ;

The Contracted firm should prove it has the technical capacity presenting the following documents:

- Copy of registration in the Defense Ministry in the" A" category, of the terms of Decree 2278 of 7/17/97 and Decree n. 637- SC-62/FA-61 of 03/05/98
- Copy of the License given by the ANAC- Civil Aviation National Agency, giving permission for the firm of aerophotogrammetric specialized services to work, as required by Decree n° 5.731 of 03/20/2005;
- Proof of Registration of the Firm and Responsible technician in the CREA/RS (Regional Engineering, Architecture and Agronomy Professional Council of the State of Rio Grande do Sul);
- List and Resumes of the technicians selected for the job and description of the function of each person and his link to the firm;
- Location of the plant, the program, and available equipment for the accomplishment of the Bidding objective;
- Proof of Professional technical capacity of the Firm technician responsible through a certificate given by a person/entity/firm of public or private law duly verified by CREA and proving the technician has already performed similar jobs in equal or superior amounts as compared to the one being proposed. Certificates for jobs which were not finished or were half finished will not be accepted.

The technician team selected by the proponent for the supervision of the project:

The Contracted firm should list their team of professional technicians with skills to perform the job (Cartographic Engineer, Topography and Geodesy Engineer or Geography Engineer – art. 6°, item I of Resolution 218 of 06/29/73 of the CONFEA, or Surveyor Engineer), as proof of experience along with a certificate of technical capacity; The list presented should be accompanied by the professional's

resume. The firm should also provide documents showing the technician's employment binding with the Contracted firm.

9 GENERAL PROVISIONS

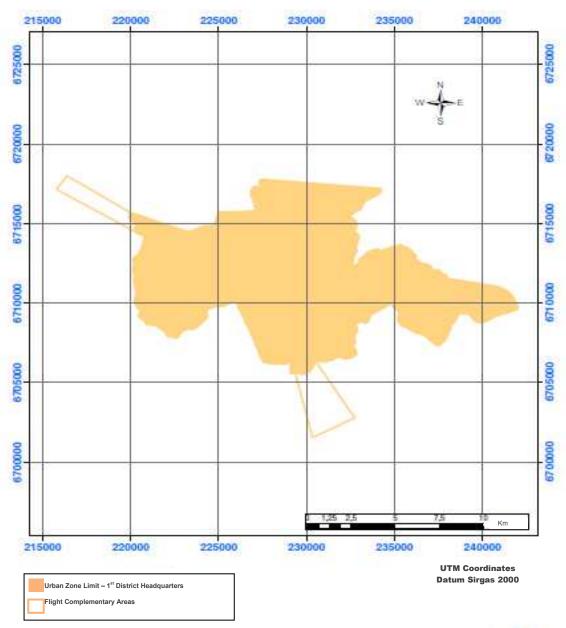
The CONTRACTED firm should submit the complete planning of the project for the approval of the CONTRACTOR. It should present a detailed description of each phase of the work. The CONTRACTED firm should present activities reports and related products at the end of each phase described in the Chronogram of activities of this document for the analysis and approval of the CONTRACTOR.

In order to enable the analysis and supervision of the works being performed and of its respective products, the CONTRACTED firm should allow the CONTRACTOR or its agent access to its location equipment and any other resources used for the performance of the works.

All materials and preliminary reports or intermediaries to the specified products in each phase of the project should be put at the CONTRACTOR's disposal for the duration of the contract. At the end of the contract, the CONTRACTED firm will specify which intermediary materials it wants back.

The execution phases of the works related to the Restitution, Reambulation and Editing shall be performed in sequences to be defined by the CONTRACTOR.

ANNEX I: FLIGHT AREA LOCALIZATION



Annex I – Flight Area Localization

City: Santa Maria-RS Area Covering: 140 Km²



ANNEX II: LEVELS OF INFORMATION

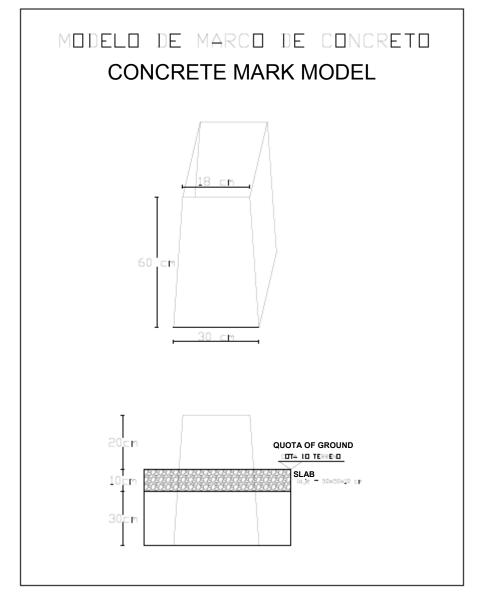
LEVELS OF INFORMATION – LEVELS OF INFORMATION DESCRIPTIONS

Structure Level	Structure
CARTOGRAPHIC DATA	
Molding	line
Articulation	
Toponymy (Articulation)	
Mesh: UTM- SIRGAS 2000 Coordinates	line
Toponymy (Mesh: UTM – SIRGAS 2000 coordinates)	
Graphic Scale – Numerical Scale	
Indication: Reference of the used photos (Flight–Flight zone–photo numbers)	text
Toponymy (Indication: Reference of the used photos)	text
Legends	text
GROUND SUPPORT	
Support Points of the 1 st order (horizontal)	point
Support Points: Horizontal Basic	point
Support Points: Vertical Basic	point
Support Points: Horizontal/Vertical Basic	point
Points of the Geodesic Network of Municipal Reference (implanted)	point
Toponymy (Geodesic Network of Municipal Reference)	text
ALTIMETRY	
Master Level Curve	
Toponymy (Master Level Curve)	text
Intermediary Level Curve	
Toponymy (Intermediary Level Curve)	text
Quoted points	point
Toponymy (Quoted points)	text
HIDROGRAPHY	
Rivers, channeled rivers, brooks, creeks.	line
Dams	polygon
Toponymy (Rivers, brooks, creeks and dams)	text
Lakes, Lagoons	polygon
Toponymy (Lakes e Lagoons)	polygon
Dikes	polygon
Springs	point or polygon
Toponymy (Dikes and Springs)	text
Drains	line
Trenches	line
Channels	line
Toponymy (Channels)	text
Swamps and areas subject to flooding and overflows	polygon
Intermittent watercourse	line
VEGETATION	
Vegetation (Forests, woods)	polygon
Vegetation (Isolated trees)	point
Toponymy (Vegetation)	text

Structure Level	Structure
Cultures	polygon
Toponymy (cultures)	text
EXPLORATION	
Mineral extraction areas	polygon
Toponymy (Mineral Extraction)	text
ENERGY/GRANDES TUBULATION AND TELECOMUNICATIONS	
Posts	point
Energy Supply Towers	point
Telecommunication Towers (Radio – TV e Cellular Phones)	point
Toponymy (Towers)	text
ROADS SYSTEM	
Toponymy (Road System)	text
Roads and Public Parks Axis	line
Curb	line
Roads Physical Divider (central bed, wall divider, physical traffic conduit)	line
WORKS OF ART	
Footbridges	line
Toponymy (Footbridges)	text
Bridges and Overpasses	line
Toponímia (Tunnels, Bridges and Overpasses)	text
Roundabouts	
STATIONS AND TERMINALS	
Bus Terminals	line
Toponymy (Bus Terminals)	text
BUILDING ALIGNMENT(BLOCKS)	
Defined Building Alignment (Blocks Outline)	line
Property Limits (Wall- Iron Fence–Fence or similar)	line
PÚBLIC BUILDINGS AND SKYSCRAPERS	
Squares, Parks or Similar	polygon
Toponymy (Squares, Parks or Similar)	text
Stadiums, Gymnasiums, Sports Courts or Similar	polygon
Toponymy (Stadiums, Gymnasiums, Sports Courts or Similar)	text
Public Schools (Federal –State– Municipal) and Private	polygon
Toponymy (Public and Private Schools)	text
Public and Private Day Nurseries	polygon
Toponymy (Public and Private Day Nurseries)	text
Colleges and Universities	polygon
Toponymy (Colleges and Universities)	text
Hospitals	polygon
Toponymy (Hospitals)	text
Cemeteries and Crematoriums	polygon
Toponymy (Cemeteries and crematoriums)	text
Airports, Aero Clubs and Landing Fields	polygon
Toponymy (Airports, Aero Clubs and Landing Fields)	text
Notable Buildings such as Shopping Malls, Museums, Theaters, Heritage Buildings, Public Buildings, Industrial or commercial Complexes	polygon

Structure Level	
Toponymy (Notable buildings)	text
LIMITS	
1 st District Headquarters Urban Zone Limit	polygon
Toponymy (1 st District HEADQUARTERS urban zone limit)	text
Limit: Fiscal Sector	polygon
Toponymy (Limit: Fiscal Sector)	text
Limit: Neighborhoods	polygon
Toponymy (Limit: Neighborhoods)	text

ANNEX III: MODEL



Section IX. Contract Forms

Table of Forms

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Performance Bank Guarantee (Conditional)

This Agreement is made on the _____ day of ____, ___ between _____ of _____ (hereinafter called "the Guarantor") of the one part and ______ of _____ (hereinafter called "the Employer") of the other part.

Whereas

(1) This Agreement is supplemental to a contract (hereinafter called the Contract) made between ______ of _____ (hereinafter called the Service Provider) of the one part and the Employer of the other part whereby the Service Provider agreed and undertook to execute the Services of ______ for the sum of being the Contract Price; and

(2) The Guarantor has agreed to guarantee the due performance of the Contract in the manner hereinafter appearing.

Now therefore the Guarantor hereby agrees with the Employer that upon receipt of

(1) a written notice to the Guarantor from the Service Provider, or

(2) a written notice to the Guarantor from the Adjudicator, or

(3) a binding arbitration or Court award confirming that the amount of the Guarantee is payable to the Employer,

the Guarantor will indemnify and pay the Employer the sum of _____, ____ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, provided that the Employer or his authorized representative has notified the Guarantor to that effect and has made a claim against the Guarantor not later than the date of issue of the Defects Liability Certificate.

The Guarantor shall not be discharged or released from his Guarantee by an arrangement between the Service Provider and the Employer, with or without the consent of the Guarantor, or by any alteration in the obligations undertaken by the Service Provider, or by any forbearance on the part of the Service Provider, whether as to the payment, time, performance or otherwise, and any notice to the Guarantor of any such arrangement, alteration, or forbearance is hereby expressly waived.

Given under our hand on the date first mentioned above.

Signed by	
for and on behalf of the Guarantor in the presence of	
1	

Signed by _____

for and on behalf of the Employer in the presence of ______

Performance Bank Guarantee (Unconditional)

То: _____

 Whereas ______ (hereinafter called "the Service Provider") has undertaken, in

 pursuance of Contract No. ______ dated _____ to execute

 ______ (hereinafter called "the Contract");

And whereas it has been stipulated by you in the said Contract that the Service Provider shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

And whereas we have agreed to give the Service Provider such a Bank Guarantee;

Now therefore we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Service Provider, up to a total of ______, _____, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of ______ / as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Service Provider before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Services to be performed there under or of any of the Contract documents which may be made between you and the Service Provider shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any such change, addition, or modification.

This Guarantee shall be valid until a date 28 days from the date of issue of the Certificate of Completion.

Signature and seal of the Guarantor

Name of Bank	
Address	
Date	

Performance Bond

By this Bond, ______ as Principal (hereinafter called "the Service Provider") and ______ as Surety (hereinafter called "the Surety"), are held and firmly bound unto ______ as Obligee (hereinafter called "the Employer") in the amount of ______ for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Service Provider and the Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Whereas the Service Provider has entered into a Contract with the Employer dated the _____day of _____, ____for _____ in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

Now, therefore, the Condition of this Obligation is such that, if the Service Provider shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise it shall remain in full force and effect. Whenever the Service Provider shall be, and declared by the Employer to be, in default under the Contract, the Employer having performed the Employer's obligations there under, the Surety may promptly remedy the default, or shall promptly:

- (1) complete the Contract in accordance with its terms and conditions; or
- (2) obtain a Bid or bids from qualified bidders for submission to the Employer for completing the Contract in accordance with its terms and conditions, and upon determination by the Employer and the Surety of the lowest responsive Bidder, arrange for a Contract between such Bidder and Employer and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by the Employer to the Service Provider under the Contract, less the amount properly paid by the Employer to the Service Provider; or
- (3) pay the Employer the amount required by the Employer to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of one year from the date of issuance of the Certificate of Completion.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Employer named herein or the heirs, executors, administrators, successors, and assigns of the Employer.

In testimony whereof, the Service Provider has hereunto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its legal representative, this _____ day of _____.

igned by	
n behalf of	
n the capacity of	
the presence of	
Date	
igned by	
n behalf of	
the capacity of	
the presence of	

Date

Bank Guarantee for Advance Payment

То:

Gentlemen:

In accordance with the provisions of the Conditions of Contract, Sub-Clause 6.4 ("Terms and Conditions of Payment") of the above-mentioned Contract, ______ (hereinafter called "the Service Provider") shall deposit with ______ a Bank Guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of

We, the ______, as instructed by the Service Provider, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _______ on his first demand without whatsoever right of objection on our part and without his first claim to the Service Provider, in the amount not exceeding ______

We further agree that no change or addition to or other modification of the terms of the Contract or of Services to be performed there under or of any of the Contract documents which may be made between ______ and the Service Provider, shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any such change, addition, or modification.

This Guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until ______ receives full repayment of the same amount from the Service Provider.

Yours truly,

Name of Bank/Financial Institution:	
Address:	
Date:	

Notice of Bidding

Date: January 26, 2012 Loan Agreement No. 7648-BR Edictal- ICB No. 002/2011

1. The municipality of Santa Maria – State of Rio Grande do Sul, received a loan from the International Bank for Reconstruction and Development, in the amount of 13,950,000.00 USD (Thirteen million nine hundred and fifty thousand dollars) to finance the "Santa Maria 2020 Project", and intends to apply part of the proceeds of this loan to eligible payments under the Contract to hire company to perform specialized technical services for aerophotogrammetric survey for the city of Santa Maria.

2. The municipality of Santa Maria, hereinafter "Purchaser" requests sealed bids for eligible bidders for the supply of services referred to in Item 1 above and described in the Technical Specifications (Section VIII of the Edictal).

3. A complete set of Bidding Documents in English and Portuguese, can be acquired by interested through a written request to the address described below or on the Internet at the following address: www.pdmi.com.br – "Cidade de Santa Maria" (City of Santa Maria) – "Editais" (Edictals). In the first case, the Bidding Documents will be sent via email.

4. Proposals should be directed to "PREFEITURA DE SANTA MARIA" (MUNICIPALITY OF SANTA MARIA) – "COMISSÃO DE LICITAÇÃO DO BANCO MUNDIAL" (COMMISSION OF THE WORLD BANK BIDS) – "RUA VENÂNCIO AIRES, N° 2277 / 2° ANDAR" (2277 VENÂNCIO AIRES ST, 2nd FLOOR, SANTA MARIA - RS - BRAZIL, CEP 97010-005 (ZIP CODE), before 03/16/2012, at 09:00 a.m. (Brasília Time/GMT -3). Late bids will be rejected. Bids will be opened in the presence of the bidders' representatives who choose to attend in person the address above on 03/16/2012, at 09:00 a.m. (Brasília Time/GMT -3). All bids must be accompanied by a "Bid Security", as IAC 21.2.

5 The services must be performed as described in Section VIII, Specifications of the Bid.

MUNICIPALITY OF SANTA MARIA COMMISSION OF THE WORLD BANK BIDDING 2277 VENÂNCIO AIRES ST., 2nd FLOOR SANTA MARIA – RS ZIPCODE 97010-005 BRAZIL

> Alexandre Niederauer President of the Commission