



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 186-2009

**SUPPLY AND DELIVERY OF LOW LEVEL COLOUR AERIAL PHOTOGRAPHY IN
DIGITAL FORMAT**

TABLE OF CONTENTS

PART A - BID SUBMISSION

Form A: Bid	1
Form B: Prices	3
Form B: Prices	4

PART B - BIDDING PROCEDURES

B1. Contract Title	1
B2. Submission Deadline	1
B3. Enquiries	1
B4. Addenda	1
B5. Substitutes	2
B6. Bid Submission	2
B7. Bid	3
B8. Prices	4
B9. Qualification	4
B10. Opening of Bids and Release of Information	5
B11. Irrevocable Bid	5
B12. Withdrawal of Bids	5
B13. Evaluation of Bids	6
B14. Award of Contract	7

PART C - GENERAL CONDITIONS

C0. General Conditions	1
------------------------	---

PART D - SUPPLEMENTAL CONDITIONS

General

D1. General Conditions	1
D2. Scope of Work	1
D3. Definitions	1
D4. Contract Administrator	1
D5. Notices	1

Submissions

D6. Authority to Carry on Business	1
D7. Insurance	2

Schedule of Work

D8. Commencement	2
D9. Lease Versus Ownership	2
D10. Delivery	3

Measurement and Payment

D11. Payment	3
D12. Payment Schedule	3

Warranty

D13. Warranty	3
---------------	---

PART E - SPECIFICATIONS

General

E1. Applicable Specifications and Drawings	1
E2. Approved Products	1
E3. background	1
E4. Goods	1

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 SUPPLY AND DELIVERY OF LOW LEVEL COLOUR AERIAL PHOTOGRAPHY IN DIGITAL FORMAT

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, March 27, 2009.

B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. ENQUIRIES

B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.

B3.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.

B3.3 If the Bidder is unsure of the meaning or intent of any provision therein, the Bidder should request clarification as to the meaning or intent prior to the Submission Deadline.

B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B3.5 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B3.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B4. ADDENDA

B4.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

B4.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

B4.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

B4.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B4.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B5. SUBSTITUTES

- B5.1 The Work is based on the materials, equipment, methods and products specified in the Bid Opportunity.
- B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B5.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least seven (7) Business Days prior to the Submission Deadline.
- B5.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the material, equipment, method or product as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract.
- B5.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B5.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B5.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B5.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B5.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B13.
- B5.9 No later claim by the Contractor for an addition to the price(s) because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B5.10 Notwithstanding B5.2 to B5.9, and in accordance with B6.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B13.1(a).

B6. BID SUBMISSION

- B6.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
 - (b) Form B: Prices;
- B6.2 Further to B6.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B5.
- B6.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely in ink, to constitute a responsive Bid.
- B6.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B6.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1
- B6.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B6.6 Bidders are advised not to include any information/literature except as requested in accordance with B6.1.
- B6.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B13.1(a).
- B6.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.
- B6.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.
- B6.9 Bids submitted by internet electronic mail (e-mail) will not be accepted.
- B7. BID**
- B7.1 The Bidder shall complete Form A: Bid, making all required entries.
- B7.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.
- B7.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

- B7.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
 - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B7.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B7.4.2 All signatures shall be original.
- B7.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B8. PRICES

- B8.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B8.1.1 Prices on Form B: Prices shall include:
- (a) duty;
 - (b) freight and cartage;
 - (c) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable] and all charges governmental or otherwise paid;
 - (d) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.
- B8.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B8.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B9. QUALIFICATION

- B9.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; and
 - (b) be financially capable of carrying out the terms of the Contract; and
 - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B9.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>

B9.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba);

B9.4 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B9.5 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B10. OPENING OF BIDS AND RELEASE OF INFORMATION

B10.1 Bids will not be opened publicly.

B10.2 Following the Submission Deadline, the names of the Bidders and their bid prices (unevaluated, and pending review and verification of conformance with requirements or evaluated prices) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>

B10.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>

B10.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B11. IRREVOCABLE BID

B11.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B11.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

B12. WITHDRAWAL OF BIDS

B12.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B12.1.1 Notwithstanding C21, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.

B12.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

B12.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Bid until after the Submission Deadline has elapsed;
- (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B12.1.3(b), declare the Bid withdrawn.

B12.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B11.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B13. EVALUATION OF BIDS

B13.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity, or acceptable deviation therefrom (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B9 (pass/fail);
- (c) Total Bid Price;

B13.2 Further to B13.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.

B13.3 Further to B13.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.

B13.5 Further to B13.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item, for each alternative, shown on Form B: Prices.

B13.5.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B13.5.2 Further to B13.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B13.6 If the Bidder's lowest Total Bid Price for Alternative 2 Full Ownership is within 30% of the lowest Total Bid Price for Alternative 1 Conditional Lease Agreement (of another or same Bidder), the City may choose to award the Bid Opportunity to the lowest Bidder of Alternative 2.

B13.7 This Contract may be awarded on the basis of:

- (a) Alternative 1 – Conditional Lease; or
- (b) Alternative 2 – Full Ownership;

as identified on Form B: Prices. Each alternative will be evaluated in accordance with the specified evaluation criteria.

- B13.7.1 Notwithstanding B8.1, the Bidder may, but is not required to, bid on all alternatives.
- B13.7.2 Notwithstanding B14.3, the City shall have the right to choose the alternative that is in its best interests. If the Bidder has not bid on all alternatives, he shall have no claim against the City if his partial Bid is rejected in favour of an award of the Contract on the basis of an alternative upon which he has not bid.

B14. AWARD OF CONTRACT

- B14.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B14.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B14.2.1 Without limiting the generality of B14.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B14.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B13.
- B14.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.
- B14.4 Notwithstanding C4 and Paragraph 6 of Form A:Bid, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B14.5 The Contract Documents, as defined in C1.1(n) (ii) in their entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that they are not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for the Supply and Delivery of Goods* (Revision 2008 05 26) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for the Supply and Delivery of Goods* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm
- C0.2 A reference in the Bid Opportunity to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Supply of Goods*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

D1.1 In addition to the *General Conditions for the Supply and Delivery of Goods*, these Supplemental Conditions are applicable to the Work of the Contract.

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the supply and delivery of low level colour aerial photography in digital format.

D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

- (a) "Colour ortho-photo-digital base maps" means aerial photos of an area that are mosaiced to produce a single seamless image of the area, ortho-rectified to remove measurement errors and delivered in a digital format.
- (b) "UM" means, Micrometer.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Andre Lederer
GIS Solutions Project Leader
6th Floor 510 Main St.
Winnipeg MB R3B 1B9
Telephone No.: (204) 204-803-0398
Facsimile No.: (204) 204-986-5966

D5. NOTICES

D5.1 Notwithstanding C21.3, all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following address or facsimile number:

The City of Winnipeg
Chief Financial Officer
Administration Building, 3rd Floor
510 Main Street
Winnipeg MB R3B 1B9
Facsimile No.: (204) 949-1174

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

D6.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D7. INSURANCE

- D7.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least five million dollars (\$5,000,000.00) inclusive, with The City of Winnipeg added as an additional insured; such liability policy to also contain a cross-liability clause, contractual liability, non-owned automobile liability and products and completed operations cover, to remain in place at all times during the performance of the Work;
 - (b) Aircraft Liability Insurance providing coverage in the amount of at least five million dollars (\$5,000,000) all inclusive. This policy shall include The City of Winnipeg as an additional insured, and shall contain a cross liability clause.
- D7.2 Deductibles shall be borne by the Contractor.
- D7.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D7.4 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

SCHEDULE OF WORK

D8. COMMENCEMENT

- D8.1 The Contractor shall not commence any Work until he is in receipt of a notice of award from the City authorizing the commencement of the Work.
- D8.2 The Contractor shall not commence any Work until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D6;
 - (ii) evidence of the workers compensation coverage specified in C6.16;
 - (iii) evidence of the insurance specified in D7;
 - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.
- D8.3 The City intends to award the Contract by April 9, 2009.

D9. LEASE VERSUS OWNERSHIP

- D9.1 The City will award the contract based on either a Lease or Ownership agreement.
- D9.2 "Conditional Lease agreement" means that the City of Winnipeg shall lease the goods specified in this Bid Opportunity from the Contractor with the following conditions.
- (a) The City of Winnipeg shall take Joint Ownership of the goods after one year from the date of the award of contract.
 - (b) The City of Winnipeg may sell products derived from the goods in this bid opportunity in digital or hardcopy format where the size of the imagery shall not exceed a 500m X 500m representation of area on any photo. The City shall not pay any royalty to the Contractor.
 - (c) The City of Winnipeg may provide the goods to external businesses that are working for the City. Businesses shall be given the City's standard non disclosure agreement pertaining to the use of Aerial Photography.

- (d) The City of Winnipeg may display the goods on a viewer designed for public use or private business usage and may charge for this service and will not pay any royalty to the Contractor.
- (e) The City shall not be under obligation to make reference to the Contractor on any type of media (i.e. digital or paper) produced by the City.
- (f) The City shall not sell or give away the goods for a period of one year from the date of the award of contract.

D9.3 "Joint Ownership" means that the City of Winnipeg and the Contractor are full and equal owners of the goods specified in the bid opportunity including any and all copyright the contractor would otherwise exclusively possess. Further to D9.2(a), the City or the Contractor may sell or give away any or all of the goods without having to consult the other owner.

D9.4 "Full Ownership" means the City of Winnipeg is the sole owner of the goods, including any and all copyright the Contractor would otherwise possess or lay claim to. Thus the contractor may not keep for their use, give away or sell the goods. The contractor however must keep a copy of the delivered goods for one year after delivery for warranty purposes.

D10. DELIVERY

D10.1 Within 40 days of photo acquisition the City requires the uncorrected, untouched, raw TIFF image files, camera calibration reports and exterior orientation parameter files and any other information required for the extraction of elevation measurement values from the imagery. Data to be provided in digital format.

D10.2 Within 120 days of photo acquisition, initial Orthophotos **shall be** delivered. This allows the City to see the data and point out any problem areas before final delivery.

D10.3 The completed, compiled and fully approved colour photos, and ortho-photo base maps shall be delivered to the City of Winnipeg by **Sept 30th 2009**. If Alternative 2 is awarded, Negatives shall also be included in the September 30, 2009 delivery and payment shall be in accordance with D12.1.

D10.4 The Contractor shall notify the Contract Administrator or his/her designate of each delivery at least two (2) Business Days before delivery.

MEASUREMENT AND PAYMENT

D11. PAYMENT

D11.1 Further to C10, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D12. PAYMENT SCHEDULE

D12.1 Further to C10, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice for Alternative 1 or Alternative 2.

WARRANTY

D13. WARRANTY

D13.1 Warranty is as stated in C11.

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 Delivery shall be in accordance with D9.
- E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B5.

E2. APPROVED PRODUCTS

- E2.1 The following products are approved:
 - (a) Vexcel UltraCam model X or D Aerial Camera;
 - (b) DiMac II Aerial Camera.
 - (c) Line Scanners/Swath Cameras shall not be considered.
 - (d) Film cameras that use 23cm X 23cm negatives shall be considered for this Bid Opportunity.
 - (e) Only modern large format photogrammetric cameras that will provide suitable photography for topographic mapping (ie Leica RC30, Ziess Top 30) with forward motion compensation shall be considered.

E3. BACKGROUND

- E3.1 Background is offered as information only. The City of Winnipeg's cadastral map index is divided into one (1) square kilometre areas. There are 549 map sheets within or on the City's boundaries. All coordinates specified in this document and any map products supplied by the City and all map products supplied by the Supplier shall be based on Geodetic Datum NAD 83 and Zone 14 N.
- E3.2 Appendix A is attached which provides a basic reference image for the aerial photography.

E4. GOODS

- E4.1 The Contractor shall supply and deliver colour aerial photos and ortho-rectified imagery in digital format of the City of Winnipeg and surrounding area in accordance with the requirements hereinafter specified.
 - E4.1.1 Air photography shall occur after the snow melts and before the trees grow foliage which is approximately late April to early May.
 - E4.1.2 The Aerial Photos shall be taken under a clear sky unless the contractor can prove that the camera they will use can take comparable images in overcast conditions.
 - E4.1.3 No imagery shall be acceptable if taken under conditions of precipitation.
 - E4.1.4 Photos are to be taken either under uniformly clear or uniformly cloudy conditions.
 - E4.1.5 The Contractor shall ortho-rectify imagery and clip it against the City's 1 sq km tile grid for area inside the City and against the 4 sq km tile grid for area outside the City limit. The City shall provide the grid in MapInfo or ESRI format to the Contractor.
 - E4.1.6 The Contract Administrator is available to supply an electronic copy of a map of the Geodetic Control Monuments in the City upon request.

- E4.2 For digital and film cameras - the Contractor shall supply colour aerial photography in digital format in accordance with the requirements hereinafter specified:
- (a) The colour low level aerial photography shall be derived from vertical aerial photographs of the City of Winnipeg and surrounding area.
 - (b) Vertical aerial photography shall comply with the Interdepartmental Committee on Air Surveys (ICAS) Standards and may be viewed at:
http://maps.nrcan.gc.ca/icas/ICAS_Specification_for_Aerial_Survey_Photos_2000.pdf
 - (c) Aerial photos obtained prior to contract award will not be accepted unless written permission is given by the contract administrator to fly earlier.
 - (d) Topographic information shall be photogrammetrically compiled in the form of a digital elevation model (DEM) and the photogrammetric data shall be stereo digitized with a first order analytical or digital stereo plotter.
 - (e) The camera shall be mounted vertically in the aircraft. The camera shall be isolated from the vibration of the aircraft. Angular vibration of the camera shall be reduced to a level that does not significantly affect the image resolution at the shutter speeds used.
 - (f) The camera compartment of the aircraft should be maintained at a temperature of 20° C + or - 2° C.
 - (g) Exposure shall be made at the aperture setting and shutter speed setting for maximum resolution and minimum image motion. Image motion shall be held to less than 20 µm.
 - (h) Photography shall extend far enough beyond the borders of the specified area to ensure full stereoscopic coverage of the entire area within the borders.
 - (i) All aerial photography shall be delivered on new hard drives. These hard drives shall become the property of the City.
 - (j) Ortho-rectified files shall be delivered on new external USB 2 hard drive(s), physically separate from the raw non-rectified imagery hard drives.
 - (k) Non ortho-rectified files shall be delivered on new external USB 2 hard drive(s), physically separate from the raw ortho-rectified hard drive(s).
 - (l) The Contractor shall forward ECW compression rates and send sample image files to the Contract Administrator of the air photography at various compression rates. The contract administrator shall decide from the samples which compression rate the Contractor shall use for the ECW formatted image files.
 - (m) The dynamic range of the camera shall be such that detail within ground shadows can easily be resolved with no or small amounts of visible noise or grain while still avoiding blown highlights. The dynamic range must be visibly equal to or better than the City's 2005 Aerial Photography. Samples of this photography can be made available upon request to the Contractor.
 - (n) The Contractor shall provide untouched raw TIFF image files, camera calibration reports, exterior orientation parameters and any other information required for the extraction of elevation values from the imagery, in digital format.
 - (o) The Contractor shall provide all GPS base station data collected during the acquisition
- E4.2.1 Additional film based camera specifications:
- (a) The film used in film based cameras shall be scale-stable (such as the Cronar or Estar-based films), shall not have passed the expiration date and shall have been stored in accordance with the manufacturer's instructions.
 - (b) The negatives of film based cameras shall be scanned uncut at a resolution of 15 micrometers or at a resolution that results in a better image quality. The resulting image shall be reversed to produce positive images.
 - (c) Negatives shall be stored in appropriate containers.

- (d) The vacuum supply to the camera shall be sufficient to provide acceptable image sharpness in every exposure. It is preferable that the camera be automatically rendered inoperable if the vacuum system fails.
- (e) The camera shall be oriented so that the film transport over the focal plane is in the direction of flight.
- (f) The scanner used to scan film based camera negatives shall have a valid calibration report in terms of geometric and radiometric accuracies and the geometric accuracy of the scanner shall be 3 micrometers at one standard deviation or better. There shall be no error exceeding 9 micrometers.

E4.2.2 Additional digital camera Specifications:

- (a) For digital cameras that use pan-sharpening, the colour registration must be no less perceptibly accurate than images from a film camera. (For a practical example - the green colour of grass along a cement sidewalk shall not be shifted (bleed) over onto the sidewalk making the fringe of the walk a shade of green).

E4.3 **Item No. 1** – Alternative 1 - Conditional Lease inside the City boundary shall be:

- (a) The scale of photography for each 23cm X 23cm negative of a film based camera shall be 1:10000.
 - (i) For digital cameras whose sensors are designed differently than the traditional analogue large format survey camera, the flying height may differ. However, it is required that the flying height of the aircraft be such that the delivered imagery is greater than (more resolved) or equal to the resolution of the imagery from an analog camera using the specifications mentioned in this bid opportunity. Therefore it is assumed that the raw imagery shall be captured so that each raw pixel covers less than 20cm (i.e. 17cm) of ground coverage then post processed to a resolution of 20cm.
- (b) Ortho-rectified imagery shall have a horizontal error of no greater than 40cm.
- (c) The aerial photos shall be geo-referenced and geo-coded to the City's cadastral base.
- (d) The colour ortho-photo digital images shall be delivered in .TIFF and .ECW format. The .TIFF format images shall be delivered as 549, 20cm resolution images. Each image file shall have an associated world file. The .ECW format images shall be delivered as 549, 20cm resolution image files and as a single 20cm resolution mosaic file. Each image shall be clipped against the City's 1km square tile grid which shall be provided to the Contractor.
- (e) The raw untouched non-rectified photos shall be delivered in .TIFF format, from either the digital camera or scanned negatives of a film-based camera.
- (f) A flight index map and an aerial photography film report are required. The flight index map shall consist of geo-coded points in shape or mapInfo format in UTM NAD 83 and Zone 14 that represent the location from where each photo was taken. Each point shall have the following attribute information at minimum.
 - (i) Image Name – corresponding to the raw .TIFF image file names.
 - (ii) Flight Direction
 - (iii) Altitude
 - (iv) Date acquired
 - (v) Time acquired
 - (vi) Forward overlap i.e. 60%
 - (vii) Side overlap i.e. 30%
 - (viii) Latitude
 - (ix) Longitude
 - (x) Aperture
 - (xi) Shutter
 - (xii) Source

(xiii) Comments

- (g) There shall be 549 ortho-photos, each covering a ground area of one square kilometre and be relative to the City of Winnipeg's cadastral map index. The index grid file shall be made available to the successful bidder in a MapInfo or ESRI format.
- (h) **Designated Downtown Area** – For the Designated Downtown Area, flight lines shall be flown north-south with 80% forward overlap and 50% lateral overlap.
- (i) **Designated Downtown Area coordinates** using UTM NAD 83 and Zone 14 projection
 - (i) North West Co-ordinate: Easting = 632,425.05 Northing = 5,529,434.79
 - (ii) North East Co-ordinate: Easting = 634,133.72 Northing = 5,529,434.79
 - (iii) South West Co-ordinate Easting = 632,425.05 Northing = 5,526,062.99
 - (iv) South East Co-ordinate Easting = 634,133.72 Northing = 5,526,062.99
 - (v) Thus the distance from the North-West point eastward is 1.73 km and 3.372 km southward. This creates an area measuring a total of 5.76 sq km.
- (j) Outside the Designated Downtown Area, flight lines shall be flown north-south with 60% forward overlap and the lateral overlap between flight lines shall be 30%.

E4.4 **Item No. 2** – Alternative 1 - Conditional Lease outside the City boundary shall be:

- (a) The scale of photography for each 23cm X 23cm negative of a film based camera shall be 1:30000.
 - (i) For digital cameras whose sensors are designed differently than the traditional analogue large format survey camera, the flying height may differ. However, it is required that the flying height of the aircraft be such that the delivered imagery is greater than (more resolved) or equal to the resolution of the imagery from an analog camera using the specifications mentioned in this bid opportunity for this Item. Therefore the raw imagery shall be captured so that the raw pixels cover less than 50cm (i.e. 45cm) of ground coverage then post processed to a resolution of 50cm.
- (b) The colour ortho-photo digital base maps shall be delivered in .TIFF and .ECW format. The .TIFF format images shall be delivered as 575, 50cm resolution image files. Each image file shall have an associated world file. The .ECW format imagery shall be delivered as 575, 50cm resolution image files and as a single 50cm resolution mosaic image file merged together with the 20cm mosaic of Item 1.
- (c) If using a film based camera, the negatives shall be delivered in appropriate containers.
- (d) The raw untouched non-rectified photos shall be delivered in .TIFF format, from either the digital camera or scanned negatives of a film-based camera.
- (e) Ortho-rectified imagery shall have a horizontal error of no greater than 100 cm.
- (f) The flight lines shall be flown with the standard 60% forward overlap and 30% lateral overlap
- (g) A flight index map and an aerial photography film report are required. The flight index map shall consist of geocoded points in Shape or MapInfo format in UTM NAD 83 and Zone 14 that represent the location from where each photo was taken. Each point shall have the following attribute information at minimum.
 - (i) Image Name – corresponding to the raw .TIFF image file names.
 - (ii) Flight Direction
 - (iii) Altitude
 - (iv) Date acquired
 - (v) Time acquired
 - (vi) Forward overlap i.e. 60%
 - (vii) Side overlap i.e. 30%
 - (viii) Latitude
 - (ix) Longitude

- (x) Aperture
- (xi) Shutter
- (xii) Source
- (xiii) Comments

- (h) There shall be 575 ortho-photos, each covering a ground area of four (4) square kilometres and be relative to the City of Winnipeg's cadastral map Index. The grid index shall be provided to the Successful Bidder in a MapInfo or ESRI format.
- (i) The extent of coverage shall be a rectangle measuring 50 kilometres East/West and 56 kilometres North/South and whose South-West corner shall be at the UTM co-ordinates 608000E and 5496000N.
- (j) Air photography described in Item 1 (imagery within the City limits) shall be excluded from coverage.

E4.5 **Item No. 3** – Alternative 2 – Full Ownership shall be as described in E4.3.

E4.6 **Item No. 4** – Alternative 2 – Full Ownership shall be as described in E4.4.