



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 134

SUPPLY AND DELIVERY OF DIGITAL COLOUR ORTHO-PHOTO BASE MAPS

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PART B

BIDDING PROCEDURES

PART B - BIDDING PROCEDURES

B1. PROJECT TITLE

B1.1 SUPPLY AND DELIVERY OF DIGITAL COLOUR ORTHO-PHOTO BASE MAPS

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, March 21, 2005.
- B2.2 Bid Submissions 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 D5.1.
- 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 notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.
- B3.3 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.
- B3.4 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.
- B3.5 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 in Adobe Acrobat (pdf) format on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>.
- B4.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Division internet site for addenda shortly before submitting his Bid.
- B4.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 9 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 at 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 shall 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.

B6. BID SUBMISSION

- B6.1 The Bid Submission consists of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices;

B6.2 All components of the Bid Submission 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.

B6.3 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.

B6.4 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 Branch
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B6.4.1 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.

B6.5 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178

B6.5.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B6.6 Bid Submissions 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 11 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 and the corporate seal, if the corporation has one, should be affixed;
- (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 shall be printed below such signatures.

B7.4.2 All signatures shall be original and shall be witnessed except where a corporate seal has been affixed.

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 Submission 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;
- (b) be responsible and not be suspended, debarred or in default of any obligation to the City;
- (c) be financially capable of carrying out the terms of the Contract;
- (d) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;
- (e) have successfully carried out work, similar in nature, scope and value to the Work;

- (f) employ only Subcontractors who:
 - (i) are responsible and not suspended, debarred or in default of any obligation 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 internet site at <http://www.winnipeg.ca/matmgt>); and
 - (ii) have successfully carried out work similar in nature, scope and value to the portion of the Work proposed to be subcontracted to them, and are fully capable of performing the Work required to be done in accordance with the terms of the Contract;
- (g) have a written workplace safety and health program in accordance with The Workplace Safety and Health Act (Manitoba);

B9.2 The Bidder shall be prepared to 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.

B9.3 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 Bid Submissions will not be opened publicly.

B10.2 Within two (2) Business Days following the Submission Deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available in Adobe Acrobat (pdf) format on the Closed Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site 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 page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>.

B10.4 The Bidder is advised that any information contained in any Bid Submission may be released if required by City policy or procedures, or by other authorities having jurisdiction.

B11. IRREVOCABLE BID

B11.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 10 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 10 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 GC.7.05(2), 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 11 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 shall:
- (a) retain the Bid Submission until after the Submission Deadline has elapsed;
 - (b) open the Bid Submission to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 11 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 Award Authority considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

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;
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B9;
 - (c) Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B5.
- 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 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 Submission or in other information required to be submitted, that he is responsible and qualified.
- B13.4 Further to B13.1(c), the Bid Price shall be the unit prices for each item shown on Form B: Prices.
- B13.5 This Contract may be awarded as a whole (Alternative 1) **or** (Alternative 2) or separately by item in either Alternative as identified on Form B: Prices.
- B13.5.1 Notwithstanding B8, the Bidder may, but is not required to, bid on both alternatives, or on any one or more item in either Alternative.
- B13.5.2 The City shall not be obligated to award any item to the responsible Bidder submitting the lowest evaluated responsive Bid for that Alternative and shall have the right to choose the alternative which is in its best interests. If the Bidder has not bid on both alternatives or on all items in either Alternative, 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 or item upon which he has not bid.

B14. AWARD OF CONTRACT

- B14.1 The Award Authority 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.

PART C

GENERAL CONDITIONS

PART C - GENERAL CONDITIONS

C1. GENERAL CONDITIONS

C1.1 The *General Conditions for the Supply and Delivery of Goods* (Form 21: 88 03) are applicable to the Work of the Contract.

C1.1.1 The *General Conditions for the Supply and Delivery of Goods* are available in Adobe Acrobat (.pdf) format on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>.

PART D

SUPPLEMENTAL CONDITIONS

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.
- D1.2 The General Conditions are amended by striking out "The City of Winnipeg Act" wherever it appears in the General Conditions and substituting "The City of Winnipeg Charter".
- D1.3 The General Conditions are amended by striking out "Board of Commissioners" or "Commissioner" wherever it appears in the General Conditions and substituting the "Chief Administrative Officer".
- D1.4 The General Conditions are amended by striking out "Tender Package" wherever it appears in the General Conditions and substituting "Bid Opportunity".
- D1.5 The General Conditions are amended by striking out "Tender Submission" wherever it appears in the General Conditions and substituting "Bid Submission".
- D1.6 The General Conditions are amended by striking out "Bidding Instructions" wherever it appears in the General Conditions and substituting "Bidding Procedures".

D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of the supply and delivery of colour digital ortho-photo base maps of the City of Winnipeg and surrounding area.
- D2.2 The major components of the Work are as follows:
- (a) Photographing the City of Winnipeg and surrounding area
 - (b) Creation of the complied digital colour Ortho-Photo base maps
- D2.3 The completed digital colour ortho-photo base maps will be used by the City and contractors doing work for the City.
- D2.4 On written request, the Contract Administrator can supply an electronic copy of a map of the Geodetic Control Monuments in the City.
- D2.5 The City intends to provide the Ortho-Photo base maps to departments and contractors for the purposes of conducting City business.
- D2.6 The City may chose to display the Ortho-Photo base maps on the City's internet sites.

D3. GEODETIC CONTROL MONUMENTS

- D3.1 To assist in establishing ground control, a book of Geodetic Control Monuments inside the City published by the Geodetics Branch of Planning, Property and Development Department of the City of Winnipeg is available for \$100.00 + GST. Contact the Contract Administrator for information on obtaining the book.

D4. DEFINITIONS

- D4.1 When used in this Bid Opportunity:

- (a) "**Business Day**" means any Calendar Day, other than a Saturday, Sunday, or a Statutory or Civic Holiday;
- (b) "**Submission Deadline**" and "**Time and Date Set for the Final Receipt of Bids**" mean the time and date set out in the Bidding Procedures for final receipt of Bids;
- (c) "**digital colour ortho-photo**" 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.

D5. CONTRACT ADMINISTRATOR

D5.1 The Contract Administrator is:

Bob Thiessen
Information Systems Project Leader
Information Systems Division

Telephone No. (204) 986-2194
Facsimile No. (204) 986-5966

D6. NOTICES

D6.1 GC.7.05 is hereby amended to delete reference to "registered mail" and to replace same with "ordinary mail".

D6.2 GC.7.05 is further amended hereby to include delivery by facsimile transmission (fax) as an acceptable means of delivering notices, consents, approvals, statements, authorizations, documents or other communications required or permitted to be given under this Contract. Deliveries by fax will be deemed to have been received on the day of delivery, if a business day, or if not a business day, on the business day next following the day of delivery.

D6.3 Further to GC.7.05, all notices, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.4, D6.5 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D5.1.

D6.4 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 Administrative Officer Secretariat
Administration Building, 3rd Floor
510 Main Street
Winnipeg MB R3B 1B9

Facsimile No.: (204) 949-1174

D6.5 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:

The City of Winnipeg
Corporate Services Department
Legal Services Division
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1

Facsimile No.: (204) 947-9155

SUBMISSIONS

D7. AUTHORITY TO CARRY ON BUSINESS

D7.1 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.

SCHEDULE OF WORK

D8. COMMENCEMENT

D8.1 The Contractor shall not commence any Work until he is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.

D8.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence that the Contractor is 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;

D9. CRITICAL STAGES

D9.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) Air photos shall occur after the snow melts and before the trees grow foliage which is approximately late April to early May
- (b) Digital Ortho-Photo maps shall be delivered, complete and ready for use, to the City before November 1, 2005

WARRANTY

D10. WARRANTY

D10.1 Further to GC.10.01, if a defect or deficiency prevents the full and normal use or operation of the Work or any portion thereof, for purposes of calculating the warranty period, time shall be deemed to cease to elapse for the defective or deficient portion, and for any portion of the Work whose use or operation is prevented by such defect or deficiency, as of the date on which the defect or deficiency is observed or the use or operation is prevented and shall begin to run again when the defect or deficiency has been corrected or the Work may be used or operated to the satisfaction of the Contract Administrator.

D10.2 Notwithstanding GC.10.01, GC.10.02 and D10.1, if any law of Manitoba or of the jurisdiction in which the Work was manufactured requires, or if the manufacturer provides, a longer warranty period or a warranty which is more extensive in its nature, then the provisions of such law or manufacturer's warranty shall apply.

PART E

SPECIFICATIONS

PART E - SPECIFICATIONS

GENERAL

E1. GENERAL

E1.1 These Specifications shall apply to the Work.

E2. BACKGROUND

E2.1 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. The coordinate system used is NAD 83 and UTM zone 14N.

E3. GOODS

E3.1 The Contractor shall provide digital colour ortho-photo base in accordance with the requirements hereinafter specified.

E3.2 The digital colour ortho-photo base maps shall be derived from vertical aerial photographs of the City of Winnipeg and surrounding area.

E3.3 Vertical aerial photography shall comply with Interdepartmental Committee on Air Surveys (CAS) Standards. Aerial photos shall be or have been obtained when there is/was no snow cover and the trees are/were leaf free. Aerial photos obtained prior to April 2005 will not be accepted.

E3.4 Base maps shall be geo-referenced and geo-coded to the City's Cadastral Base

E3.5 **Item # 1** - shall be digital colour ortho-photo base maps with air photo coverage of 1:10,000 scale within the City of Winnipeg limits with the following minimum requirements:

- (a) Licensed for internal use by the City of Winnipeg for three years from award of contract at which point the City takes full ownership of the digital colour ortho-photo base maps.
- (b) The flight lines shall be flown east-west with 60% forward overlap suitable for accurate stereo interpretation and digitizing; to help reduce the amount of 'building lean' on the final ortho-photos, the lateral overlap between flight lines shall be 50% through the centre of the city progressing to the standard 30% at the extreme north/south edges of the city.
- (c) The scale of photography shall be 1:10,000.
- (d) There shall be 549 map sheets, each covering a ground area of one square kilometre and be relative to the City of Winnipeg's cadastral map index shown in the attached drawing file
- (e) Topographic information shall 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. Automatically generated DEM dots will not be accepted. and
- (f) Aerial photo base maps shall be ortho-rectified and have a horizontal error of no greater than 2 pixels or 40cm.
- (g) The digital colour ortho-photo base maps shall be delivered in .TIFF and .ECW format. The .TIFF format base maps shall be delivered as four sets of map sheet files in four pixel sizes, to include 20 cm, 40 cm, 80 cm, and 160 cm ground resolution. Each map sheet file shall have an associated world file. The .ECW format base maps shall be delivered as a set of 549 map sheet files and as a single mosaic file.

- E3.6 **Item # 2** - shall be the colour digital colour ortho-photo base maps of the area surrounding the city 1:30,000 scale coverage around the City of Winnipeg limits with the following minimum requirements:
- (a) Licensed for internal use by the City of Winnipeg for three years from award of contract at which point the City takes full ownership of the digital colour ortho-photo base maps.
 - (b) The flight lines shall be flown with the standard 60% forward overlap and 30% lateral overlap
 - (c) There shall be **575** map sheets, each covering a ground area of four square kilometres and be relative to the City of Winnipeg's cadastral map index shown in the attached drawing file;
 - (d) The extent of the 1:30,000 scale Air Photo coverage shall be a rectangle measuring 50 kilometres East/West and 54 kilometres North/South and whose South-West corner shall be at the UTM co-ordinates 608000E, 5496000N. Those map sheets covered by the 1:10,000 map sheets shall be excluded from the 1:30,000 coverage. The attached drawing file shows the extents;
 - (e) 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. Automatically generated DEM point data will not be accepted; and
 - (f) Aerial photo base maps shall be ortho-rectified and have a horizontal error of no greater than 2 pixels or 100cm.
 - (g) The digital colour ortho-photo base maps shall be delivered in .TIFF and .ECW format. The .TIFF format base maps shall be delivered as four sets of 575 map sheet files. The sets will in four pixel sizes, to include 50 cm, 100 cm, 200 cm, and 400 cm ground resolution. Each map sheet file shall have an associated world file. The .ECW format base maps shall be delivered as a set of 575 map sheet files.
- E3.7 **Item # 3** - shall be full ownership of colour digital colour ortho-photo base maps described in E3.5
- E3.8 **Item # 4** - shall be full ownership of colour digital colour ortho-photo base maps described in E3.6
- E3.9 The Contractor shall provide the City with copies of the digital colour ortho-photo base maps on a progressive basis. As the digital colour ortho-photo base map is completed they shall be delivered to the City for a review as to its acceptability.
- E4. DELIVERY**
- E4.1 The completed and complied digital colour ortho photo base maps shall be delivered to the City before November 1, 2005 complete and ready for use by the City.