



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 146**

**SUPPLY AND DELIVERY OF PUBLIC ADDRESS EQUIPMENT AND CABLING**

## TABLE OF CONTENTS

### PART A - BID SUBMISSION

Form A: Bid	1
Form B: Prices	3

### PART B - BIDDING PROCEDURES

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

### PART C - GENERAL CONDITIONS

C1. General Conditions	1
------------------------	---

### PART D - SUPPLEMENTAL CONDITIONS

#### General

D1. General Conditions	1
D2. Scope of Work	1
D3. Definitions	1
D4. Contract Administrator	2
D5. Notices	2

#### Submissions

D6. Authority to Carry on Business	2
------------------------------------	---

#### Warranty

D7. Warranty	3
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### PART E - SPECIFICATIONS

#### General

E1. General	1
E2. Goods	1
E3. Delivery	6

## **PART B - BIDDING PROCEDURES**

### **B1. PROJECT TITLE**

B1.1 SUPPLY AND DELIVERY OF PUBLIC ADDRESS EQUIPMENT AND CABLING

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, April 15, 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 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 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 on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Branch 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 Branch internet site for addenda shortly before submitting his Bid.

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 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 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 shall 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 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;
  - (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 Branch 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;

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 Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch 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 (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch 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, 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 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 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 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 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 (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B9 (pass/fail);
- (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 sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B13.5 This Contract may be awarded as a whole (Alternative 1) or separately by item (Alternative 2) as identified on Form B: Prices.

B13.5.1 Notwithstanding B8.1, the Bidder may, but is not required to, bid on both alternatives, or on any one or more items in Alternative 2.

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 item 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 Alternative 2, 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 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.
- B14.4 Notwithstanding GC.3.01 and GC.3.02, 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 GC.1.01(7), 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**

### **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 on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

## 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 amplifiers, speakers, cabling, sound repeater, and enclosure for an indoor/outdoor public address system at the Assiniboine Park Zoo in accordance with the requirements hereinafter specified. The equipment will be delivered to the Communications Systems Branch of the City of Winnipeg, located at 421 Osborne Street.

#### D3. DEFINITIONS

- D3.1 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) "**SPL**" means Sound Pressure Level;
  - (d) "**PVC**" means Polyvinyl Chloride;
  - (e) "**LFS**" means Low Flame Spread;
  - (f) "**CSA**" means Canadian Standards Association;
  - (g) "**UV**" means Ultraviolet;
  - (h) "**AC**" means Alternating Current.

#### D4. CONTRACT ADMINISTRATOR

- D4.1 The Contract Administrator is:  
Jason LaFrance, P.Eng.

Radio / Electronics Engineer  
Communications Systems Branch  
421 Osborne Street  
Winnipeg, Manitoba, R3L 2A2  
  
Telephone No. (204) 986-3022  
Facsimile No. (204) 986-2666

## **D5. NOTICES**

- D5.1 GC.7.05 is hereby amended to delete reference to "registered mail" and to replace same with "ordinary mail".
- D5.2 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.
- D5.3 Further to GC.7.05, all notices, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.4, D5.5 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D4.1.
- D5.4 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
- D5.5 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**

### **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.

## **WARRANTY**

### **D7. WARRANTY**

- D7.1 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.
- D7.2 Notwithstanding GC.10.01, GC.10.02 and D7.1, 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

### GENERAL

#### E1. GENERAL

E1.1 These Specifications shall apply to the Work.

#### E2. GOODS

E2.1 The Contractor shall supply and deliver amplifiers, speakers, cabling, and enclosure for an indoor/outdoor public address system at the Assiniboine Park Zoo. All equipment will be delivered to the Communications Systems Branch of the City of Winnipeg, located at 421 Osborne, in accordance with the requirements hereinafter specified.

E2.2 Item No. 1 – Model TOA CS-304 Wide Range Horn Speaker, or equivalent, with the following minimum features:

- (a) Must be weather resistant durable including:
  - (i) Compliance with IEC IP-64 standard for dust and moisture-resistance and operate within a temperature range from at least - 20 degrees Celsius to + 55 degrees Celsius.
  - (ii) Sealed enclosure with protective stainless steel mesh grille to prevent moisture and speaker damage.
  - (iii) Full range cone type dynamic speaker treated for weather and moisture resistance.
  - (iv) The material and finish of the horn/cover shall be fire-resistant and coated to resist long-term exposure and fading effects to ultraviolet light.
  - (v) All mounting bracket hardware, including screws and bolts, shall be stainless steel.
- (b) Must be a paging speaker for voice applications providing directional sound dispersion with a sound pressure level, measured at one meter with one watt of power applied of 98dB SPL.
- (c) Must have a wide range frequency response in the range of 120 Hz to 15,000 Hz.
- (d) Must include a matching transformer to accommodate 70.7 volt and 100 volt lines.
- (e) Must provide a power handling capability of 30 Watts, with screwdriver adjustable transformer wattage taps of 30 watts (170 Ohms), 15 watts (330 Ohms), 10 watts (500 Ohms) and 5 Watts (1kOhms) at 70.7 line voltage.
- (f) Should have an integral 2 conductor speaker cable, insulated polyvinyl chloride type, with strain relief, approximately 6 millimeters in diameter.
- (g) Any equivalent horn speaker bid must not be an obsolete/discontinued model.

E2.3 Item No. 2 – Model TOA CS-64 Wide Range Horn Speaker, or equivalent, with the following minimum features:

- (a) Must be weather resistant durable including:
  - (i) Compliance with IEC IP-64 standard for dust and moisture-resistance and operate within a temperature range from at least - 20 degrees Celsius to + 55 degrees Celsius.
  - (ii) Sealed enclosure with protective stainless steel mesh grille to prevent moisture and speaker damage.
  - (iii) Full range cone type dynamic speaker treated for weather and moisture resistance.

- (iv) The material and finish of the horn/cover shall be fire-resistant and coated to resist long-term exposure and fading effects to ultraviolet light.
  - (v) All mounting bracket hardware, including screws and bolts, shall be stainless steel.
  - (b) Must be a paging speaker for voice applications providing exponential sound dispersion with a sound pressure level, measured at one meter with one watt of power applied of 96dB SPL.
  - (c) Must have a wide range frequency response in the range of 130 Hz to 13,000 Hz.
  - (d) Must include a matching transformer to accommodate 70.7 volt and 100 volt lines.
  - (e) Must provide a power handling capability of 6 Watts, with screwdriver adjustable transformer wattage taps of 6 watts (830 Ohms), 3 watts (1.7 kOhms), 1.5 watts (3.3 kOhms) and 0.5 Watts (10 kOhms) at 70.7 line voltage.
  - (f) Should have an integral 2 conductor speaker cable, insulated polyvinyl chloride type, with strain relief, approximately 6 millimeters in diameter.
  - (g) Any equivalent horn speaker bid must not be an obsolete/discontinued model.
- E2.4 Item No. 3 – Model Peavey UMA752, 75 Watt Mixer/Amplifier, or equivalent, with the following minimum features:
- (a) Must be a commercial grade high quality analog audio mixer/amplifier, with low noise design
  - (b) Must be capable of operating within a temperature range from at least - 20 degrees Celsius to + 55 degrees Celsius.
  - (c) Must have rated output power of 75 Watts.
  - (d) The mixer/amplifier must have a minimum of 3 (three) inputs including:
    - (i) A minimum of two (2) electronically balanced **line**-level inputs, line 100mv at 20kOhms, screw terminals.
    - (ii) A minimum of one (1) accessory module port for use with present and future modules for the specified amplifier. If an alternate mixer/amplifier is bid, the input module port must have the highest hierarchical muting priority or the ability to mute all other input channels with an appropriate muting module.
    - (iii) Level controls for all individual inputs (front panel) including the module input (front or rear panel) and should provide a master output level control (front panel).
  - (e) The mixer/amplifier must at least have the following outputs:
    - (i) One (1) direct output, 4 Ohms.
    - (ii) One (1) transformer balanced output, 70 volts.
  - (f) The frequency response of the power amplifier shall be:
    - (i) +/- 0.5 dB, 20 Hz to 20 kHz direct output.
    - (ii) +/- 1.0 dB, 50 Hz to 20 kHz transformer output.
  - (g) Must have speaker clipping protection system circuitry.
  - (h) Must have optional rack mounting capability, with **included** rack ears.
  - (i) Should have front panel channel input signal level and mute indicators
  - (j) Should have power on indicator.
  - (k) Any equivalent mixer/amplifier bid must not be an obsolete/discontinued model.
- E2.5 Item No. 4 - Model Peavey UMA1502, 150 Watt Mixer/Amplifier, or equivalent, with the following minimum features:

- (a) Must be a commercial grade high quality analog audio mixer/amplifier, with low noise design
- (b) Must be capable of operating within a temperature range from at least - 20 degrees Celsius to + 55 degrees Celsius.
- (c) Must have rated output power of 150 Watts.
- (d) The mixer/amplifier must have a minimum of 3 (three) inputs including:
  - (i) A minimum of two (2) electronically balanced **line**-level inputs, line 100mv at 20kOhms, screw terminals.
  - (ii) A minimum of one (1) accessory module port for use with present and future modules for the specified amplifier. If an alternate mixer/amplifier is bid, the input module port must have the highest hierarchical muting priority or the ability to mute all other input channels with an appropriate muting module.
  - (iii) Level controls for all individual inputs (front panel) including the module input (front or rear panel) and should provide a master output level control (front panel).
- (e) The mixer/amplifier must at least have the following outputs:
  - (i) One (1) direct output, 4 Ohms.
  - (ii) One (1) transformer balanced output, 70 volts.
- (f) The frequency response of the power amplifier shall be:
  - (i) +/- 0.5 dB, 20 Hz to 20 kHz direct output.
  - (ii) +/- 1.0 dB, 50 Hz to 20 kHz transformer output.
- (g) Must have speaker clipping protection system circuitry.
- (h) Must have optional rack mounting capability, with **included** rack ears.
- (i) Should have front panel channel input signal level and mute indicators
- (j) Should have power on indicator.
- (k) Any equivalent mixer/amplifier bid must not be an obsolete/discontinued model.

E2.6 Item No. 5 - Model Peavey MMA Series Module Aux 2 auxiliary pre-amplifier muting input module, or equivalent, with the following minimum features:

- (a) Must be an auxiliary pre-amp input module with muting capability.
- (b) Must be compatible with mixer/amplifier specified in E2.5 and E2.4.
- (c) Must have gain control to control the overall output level of the module.
- (d) Must have an input sensitivity of at least 100 millivolt.
- (e) Must have screw type terminals for inputs.
- (f) The frequency response of the module shall be 20 Hz to 20 kHz.
- (g) Must have a load impedance of at least 10 kOhms.
- (h) Any equivalent and compatible auxiliary pre-amplifier muting input module bid must not be an obsolete/discontinued model.

E2.7 Item No. 6 – Model TOA EV-20R desktop sound repeater, or equivalent, with the following minimum features.

- (a) Must be a desktop type device capable of repeatedly broadcasting pre-recorded voice announcements when desired by the user.
- (b) Should be capable of up to four (4) announcements and a 3 minute total time recording and playback function.

- (c) The device must be capable of recording voice announcements directly from a user microphone to the unit, via panel-mounted analog recording terminals.
  - (d) The device can have a port (USB or other) to facilitate recording by transferring the supplied sound messages from a PC to the unit.
  - (e) Must have a line input and line output for connecting various other program sources.
  - (f) Must have a busy contact control output.
  - (g) Must be AC powered or include an AC adaptor.
  - (h) The frequency response should be approximately 20 Hz to 20,000 Hz.
  - (i) Should have a user selectable message delay time.
  - (j) Any equivalent desktop sound repeater bid must not be an obsolete/discontinued model.
- E2.8 Item No. 7 – Model Middle Atlantic DWR-12-17 Wall Cabinet Enclosure complete with Front Door, or equivalent, with the following minimum features:
- (a) Must be a pivoting sectional wall cabinet to house electronic equipment.
  - (b) Must have fully welded construction, with a weight capacity of at least 150 lbs.
  - (c) Must be 17 inches deep, with at least 15 inches useable depth.
  - (d) Must have a racking height of 21 inches, equivalent to 12 rack spaces. Note that the overall height of specified cabinet is 28-1/16 inches.
  - (e) Should have a top knockout plate containing antenna knockouts.
  - (f) Must have a standard adjustable 11 gauge, 10-32 threaded rackrail.
  - (g) Should have abundant lacing points throughout interior of cabinet, to facilitate cable management.
  - (h) Must have slot patterns on the sides of cabinet to provide for superior ventilation.
  - (i) Must have a keyed centre section for security. Centre section should also contain a draw-latch.
  - (j) Must be finished in a durable textured powder coat.
  - (k) Must have a Solid Front Door with lock, equivalent to Model Middle Atlantic FD-12.
- E2.9 Item No. 8 – Model Middle Atlantic U2, Universal Rackshelve, or equivalent, with the following minimum features:
- (a) Must fit all electronic components up to 17-3/8 inches wide.
  - (b) Must be equivalent to a 3-1/2 inch, 2 space racking height.
  - (c) The depth of the rackshelve must be at least 14-3/4 inches.
  - (d) Must have a weight capacity of at least 50 pounds.
  - (e) Must be made of 16 gauge steel.
  - (f) Must be finished in a durable powder coat.
- E2.10 Item No. 9 – Model Anixter 323 series, part # 323-521-1801 unarmoured speaker cable, or equivalent, with the following minimum features:
- (a) Must be unarmoured cable suitable for installation in conduit. Also suitable for outdoor applications, when supported by a messenger.
  - (b) Must have a voltage rating of at least 300 volts alternating current.
  - (c) The conductor gauge must be 18 AWG (American Wire Gauge).
  - (d) The conductor count must be 1 twisted pair.

- (e) The conductor type must be stranded, concentric lay, Class B tinned copper.
- (f) The conductor insulation material shall be TW75 PVC (Polyvinyl Chloride) CSA (-40°C) 105°C dry/ 90°C wet.
- (g) The conductor insulation should be colour coded Black/White.
- (h) The conductor pair must have an overall shield of aluminium mylar foil and drain wire to provide 100% coverage to eliminate electrostatic interference.
- (i) The drain wire must be stranded, concentric lay, Class B tinned copper.
- (j) The drain wire must be the same gauge (AWG) as the conductors.
- (k) The overall jacket material must be:
  - (i) PVC (Polyvinyl Chloride).
  - (ii) Sunlight (UV) and weather resistant.
  - (iii) Rated for 90 degree Celsius use.
  - (iv) Pass -40 degree Celsius impact and cold bend test.
  - (v) Low flame spread (LFS) to meet CSA FT-4 vertical tray fire test.
  - (vi) Coloured either black or grey.

E2.11 Item No. 10 – Model Anixter 323 series, part # 323-529-1801 armoured speaker cable, or equivalent, with the following minimum features:

- (a) Must be armoured cable suitable for non hazardous locations where harsh conditions exist. Also suitable for outdoor applications.
- (b) Must have a voltage rating of at least 300 volts alternating current.
- (c) The conductor gauge must be 18 AWG (American Wire Gauge).
- (d) The conductor count must be 1 twisted pair.
- (e) The conductor type must be stranded, concentric lay, Class B tinned copper.
- (f) The conductor insulation material shall be TW75 PVC (Polyvinyl Chloride) CSA (-40°C) 105°C dry/ 90°C wet.
- (g) The conductor insulation should be colour coded Black/White.
- (h) The conductor pair must have an overall shield of aluminium mylar foil and drain wire to provide 100% coverage to eliminate electrostatic interference.
- (i) The drain wire must be stranded, concentric lay, Class B tinned copper.
- (j) The drain wire must be the same gauge (AWG) as the conductors.
- (k) The inner jacket material must be:
  - (i) PVC (Polyvinyl Chloride).
  - (ii) Sunlight (UV) and weather resistant.
  - (iii) Rated for 90 degree Celsius use.
  - (iv) Pass -40 degree Celsius impact and cold bend test.
  - (v) Low flame spread (LFS) to meet CSA FT-4 vertical tray fire test.
  - (vi) Coloured either black or grey.
- (l) The conductor assembly, shield with drain wire, and inner jacket material shall be covered with interlocked aluminium armour.
- (m) The overall outer jacket material must be:
  - (i) PVC (Polyvinyl Chloride).
  - (ii) Sunlight (UV) and weather resistant.
  - (iii) Rated for 90 degree Celsius use.

- (iv) Pass -40 degree Celsius impact and cold bend test.
- (v) Low flame spread (LFS) to meet CSA FT-4 vertical tray fire test.
- (vi) Coloured either black or grey
- (n) The overall diameter of the cable must not be larger than 0.6 inches.

**E3. DELIVERY**

- E3.1 Goods shall be delivered within fifteen (15) Calendar Days of the award of Contract, f.o.b. City of Winnipeg Communications Systems Branch, 421 Osborne Street, Winnipeg, Manitoba, R3L 2A2, freight prepaid.
- E3.2 Goods shall be delivered between 8:30 a.m. and 4:30 p.m. on Business Days.