



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 170-2010

**DESIGN AND CONSTRUCTION – REPLACEMENT OF INDOOR HOCKEY RINK
BOARD SYSTEM AT TERRY SAWCHUK MEMORIAL ARENA**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 DESIGN AND CONSTRUCTION – REPLACEMENT OF INDOOR HOCKEY RINK BOARD SYSTEM AT TERRY SAWCHUK MEMORIAL ARENA

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, April 1, 2010.
- 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. SITE INVESTIGATION

- B3.1 Further to C3.1, the Bidder may make an appointment to view the Site by contacting the Contract Administrator.
- B3.2 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

B4. OVERVIEW AND BACKGROUND INFORMATION

- B4.1 Based on the evaluation of the existing hockey rink condition, age, availability of parts, concerns regarding ongoing cost of repairs it was determined that it be removed to ensure public safety.
- B4.2 The new steel frame hockey rink board system shall be located on the existing location of the existing rink surface and will follow the same dimensions and radius of the existing rink boards.
- B4.3 The intent to demolish the existing rink board system and furnish and install on complete set of steel framed hockey rink boards for a 200' x 85' rink with 28'-0" corner radius.
- B4.4 The intent is for the new rink boards, player's gates, players' boxes, penalty gates, penalty boxes, timekeeper's box, timekeeper's gate and two service equipment gates to be constructed of durable, low maintenance and corrosion resistant materials which will provide good service and minimum maintenance for a 20 year expected life.
- B4.5 The new rink boards shall conform to City of Winnipeg Construction Standards and Hockey Canada Standards.

B5. ENQUIRIES

- B5.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.
- B5.2 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.
- B5.3 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.

B5.4 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.

B5.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

B6. ADDENDA

B6.1 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.

B6.2 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.

B6.2.1 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>

B6.2.2 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.

B6.2.3 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.

B7. SUBSTITUTES

B7.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.

B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.

B7.4 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 Plant, Material or method 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 proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
- (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 proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.

- B7.5 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.
- B7.6 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.
- B7.6.1 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.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 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 B16.
- B7.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B7.10 Notwithstanding B7.2 to B7.9, and in accordance with B8.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B16.1(a).

B8. BID COMPONENTS

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices;
 - (c) Team / Project Experience, Design and Systems Description;
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 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, to constitute a responsive Bid.
- B8.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B8.5 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
- B8.5.1 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.
- B8.6 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.

B8.7 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 B16.1(a).

B8.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.

B8.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B8.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B9. BID

B9.1 The Bidder shall complete Form A: Bid, making all required entries.

B9.2 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.

B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.

B9.3 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.

B9.4 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.

B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B9.4.2 All signatures shall be original.

B9.5 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.

B10. PRICES

B10.1 The Bidder shall state the lump sum price in Canadian funds for the Work on Form B: Prices.

B11. TEAM / PROJECT EXPERIENCE, DESIGN AND SYSTEMS DESCRIPTION

B11.1 Bidders shall provide, in their proposal submission, a description of the proposed services to design, build and commission the Work including but not limited to the following:

- (a) Team/Project Experience
 - (i) A list of previously completed Work, similar in nature, scope and value to the Work, references, in sufficient detail to demonstrate the Bidder's qualification to undertake the Work.
 - (ii) An organization chart showing the relationship, roles and responsibilities of the major team members who will perform the Work.
 - (iii) Design Team
 - (i) Resumes of proposed staff that will be directly involved in the project;
 - (ii) Their roles, responsibilities and reporting relationship on the project;
 - (iii) Their background, experience and training should be briefly noted.
- (b) Hockey Rink Board Design and Systems Description
 - (i) Shall consist of drawings or sketches and outline specifications based on and developed from Part E - Performance and Construction Specifications.
 - (ii) Drawings shall be at a standard scale adequate to describe the proposal and shall include at a minimum:
 - (i) Drawings including location and configuration of hockey rink layout;
 - (ii) Perspectives, sketches, details, and other submissions to illustrate the proposed design;
 - (iii) Hockey rink board system components description and/or catalogue reference;
 - (iv) Any other information that the bidder deems pertinent.

B12. QUALIFICATION

B12.1 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; 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.

B12.2 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>

B12.3 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);

B12.4 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.

B12.5 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.

B13. OPENING OF BIDS AND RELEASE OF INFORMATION

- B13.1 Bids will not be opened publicly.
- B13.2 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 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/bidopp.asp>
- B13.3 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>
- B13.4 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.

B14. IRREVOCABLE BID

- B14.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.
- B14.2 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.

B15. WITHDRAWAL OF BIDS

- B15.1 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.
- B15.1.1 Notwithstanding C23.3, 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.
- B15.1.2 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.
- B15.1.3 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 B15.1.3(b), declare the Bid withdrawn.
- B15.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B14.2 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.

B16. EVALUATION OF BIDS

- B16.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) Compliance by the Bidder with the requirements of the Request for Proposal or acceptable deviation there from:

- (i) Mandatory requirements (pass/fail);
 - (b) Qualifications of the Bidder and the Subcontractors, if any, pursuant to B13:
 - (i) Mandatory qualifications (pass/fail);
 - (c) Total Bid Price (30%);
 - (d) Team/Project Experience, Design and Systems Description (70%):
 - (i) Team/Project Experience (30%)
 - (ii) Hockey Rink Board Design and Systems Description (40%)
- B16.2 Further to B16.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid 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.
- B16.3 Further to B16.1(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.
- B16.4 Further to B16.1(c) the Total Bid Price shall be the lump sum price shown on Form B: Prices.
- B16.4.1 If there is any discrepancy between the lump sum price written in figures and the lump sum price written in words, the price written in words shall take precedence.
- B16.4.2 The Total Bid Price shall be evaluated with a weighting on 30 points out of a total of 100 possible points. As such, the lowest Bidder shall receive the full 30 points, and the second lowest Bidder and subsequent Bidders shall be pro-rated accordingly.
- B16.5 Further to B16.1(d), the Team/Project Experience, Design and Systems Description will be evaluated based upon the information provided. Each proposal will be assigned a score weighted on the basis of 70 points out of 100 possible points reflecting the suitability of the Team/Project Experience, Hockey Rink Board Design and Systems Description.
- B16.6 This Contract will be awarded as a whole.

B17. AWARD OF CONTRACT

- B17.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B17.2 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.
 - B17.2.1 Without limiting the generality of B17.2, 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.
- B17.3 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 B16.

- B17.3.1 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.
- B17.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B17.5 The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* 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 Construction*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

- D1.1 In addition to the *General Conditions for Construction*, 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 design, construction and installation of one complete 200' x 85' hockey rink board system complete with player's boxes, player's gates, penalty gates, penalty boxes, timekeeper's box, timekeeper's gate, service equipment gates, tempered glass spectator shielding/mounting hardware, elevated flooring, benches, rubber flooring, etc.
- D2.2 The major components of The Work are as follows:
- (a) Demolition and disposal of existing 200' x 85' hockey rink boards.
 - (b) Demolition and disposal of existing hockey rink steel posts.
 - (c) Removal and salvage existing tempered glass shielding and store in area designated by the Contract Administrator. Re-use existing 5'-0" high tempered glass shielding at hockey end boards and radius corners.
 - (d) Supply and install new electrical wiring connections from new timekeeper's box to existing goal lights at each rink end.
 - (e) Removal and re-installation of existing protective spectator safety netting above the tempered glass shielding at the hockey rink board sides, ends and corners. Reconnect the safety netting as per manufacturer's instructions and recommendations.
 - (f) Commissioning of the new hockey rink board system.

D3. CONTRACT ADMINISTRATOR

- D3.1 The Contract Administrator is:
- Lou Chubenko
Project Officer II
Municipal Accommodations Division
Planning, Property and Development Department
4th Floor – 185 King Street
Winnipeg, MB R3B 1J1
- Telephone No. (204) 470-7881
Facsimile No. (204) 986-7311
- D3.2 At the pre-construction meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D4. NOTICES

- D4.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D4.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D4.3,

D4.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.

- D4.3 Notwithstanding C21., 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

- D4.4 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
Internal Services Department
Legal Services Division
Attn: City Solicitor
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1
Facsimile No.: (204) 947-9155

SUBMISSIONS

D5. AUTHORITY TO CARRY ON BUSINESS

- D5.1 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.

D6. SAFE WORK PLAN

- D6.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) 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.
- D6.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

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 two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;

- (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- (c) all risks course of construction insurance in the amount of one hundred percent (100%) of the total Contract Price, written in the name of the Contractor and The City of Winnipeg, at all times during the performance of the Work and until the date of Total Performance.

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 but in no event later than seven (7) Calendar Days from notification of the award of Contract by Purchase Order.

D7.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D8. PERFORMANCE SECURITY

D8.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
- (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
- (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.

D8.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D8.2 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of Purchase Order and prior to the commencement of any Work on the Site.

D9. SUBCONTRACTOR LIST

D9.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

D10. DETAILED WORK SCHEDULE

D10.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site.

D10.2 The detailed work schedule shall consist of the following:

- (a) A critical path method (C.P.M.) schedule for the Work; and
- (b) A Gantt chart for the Work based on the C.P.M. schedule.

- D10.3 Further to D12.2(a), the C.P.M. schedule shall clearly identify the start and completion dates of all of the following activities/tasks making up the Work as well as showing those activities/tasks on the critical path:
- (a) Design of the steel frame rink board system;
 - (b) Site preparation for new rink board system (i.e. demolition and removal of existing rink boards, steel posts, player's gates, service gates, tempered glass, etc.);
 - (c) Construction of the hockey rink board system;
 - (i) Installation of components
 - (ii) Installation of resilient rubber safety surfacing at player's boxes and penalty boxes structure
 - (iii) Provide electrical wiring connections from timekeeper's box to goal lights at each rink end; and
 - (iv) Commissioning of new hockey rink board system (includes training).

SCHEDULE OF WORK

D11. COMMENCEMENT

- D11.1 The Contractor shall not commence any Work until he is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.
- D11.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D5;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D6;
 - (iv) evidence of the insurance specified in D7;
 - (v) the performance security specified in D8;
 - (vi) the Subcontractor list specified in D9; and
 - (vii) the Detailed Work Schedule specified in D10.
 - (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
- D11.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.
- D11.4 The Contractor shall not commence the Work on the Site before June 24, 2010.

D12. SUBSTANTIAL PERFORMANCE

- D12.1 The Contractor shall achieve Substantial Performance by September 17, 2010.
- D12.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D12.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D13. TOTAL PERFORMANCE

- D13.1 The Contractor shall achieve Total Performance by October 1, 2010.
- D13.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D13.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D14. LIQUIDATED DAMAGES

- D14.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City Three Hundred dollars (\$300.00) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.
- D14.2 The amount specified for liquidated damages in D14.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.
- D14.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D15. JOB MEETINGS

- D15.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D15.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D16. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D16.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

WARRANTY

D17. WARRANTY

- D17.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D17.2 Notwithstanding C13.2 or D17.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if:

- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.

FORM H1: PERFORMANCE BOND
(See D8)

KNOW ALL MEN BY THESE PRESENTS THAT

(hereinafter called the "Principal"), and

_____,
(hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

_____ dollars (\$_____)

of lawful money of Canada to be paid to the Obligee, or its successors or assigns, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee for

BID OPPORTUNITY NO. 170-2010

DESIGN AND CONSTRUCTION – REPLACEMENT OF INDOOR HOCKEY RINK BOARD SYSTEM AT
TERRY SAWCHUK MEMORIAL ARENA

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

All demands for payment shall specifically state that they are drawn under this Standby Letter of Credit.

Subject to the condition hereinafter set forth, this Standby Letter of Credit will expire on

(Date)

It is a condition of this Standby Letter of Credit that it shall be deemed to be automatically extended from year to year without amendment from the present or any future expiry date, unless at least 30 days prior to the present or any future expiry date, we notify you in writing that we elect not to consider this Standby Letter of Credit to be renewable for any additional period.

This Standby Letter of Credit may not be revoked or amended without your prior written approval.

This credit is subject to the Uniform Customs and Practice for Documentary Credit (1993 Revision), International Chamber of Commerce Publication Number 500.

(Name of bank or financial institution)

Per: _____

(Authorized Signing Officer)

Per: _____

(Authorized Signing Officer)

(See D9)

TERRY SAWCHUK MEMORIAL ARENA

[illegible]

PART E - SPECIFICATIONS

E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

- E1.1 These Performance Specifications shall apply to the Work.
- E1.1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.2 *The City of Winnipeg Standard Construction Specifications* 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>.
- E1.1.3 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2 Further to C:2.4(e), Specifications included in the Request for Proposal shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following Drawings are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
--------------------	---------------------------

Photos

PH1

- | | |
|-----|------------------------------------------------|
| VA1 | Top View of Rink Board Steel Posts/Base Plates |
| VA2 | Back View of Rink Boards and Shielding |
| VA3 | Back View of Rink Board Wood Framework |
| VA4 | View of Player's and Penalty Gates (Ice Side) |

PH2

- | | |
|-----|-------------------------------------------|
| VA5 | Player's Gate Latch Detail |
| VA6 | Hinge Detail at Double Leaf Service Gates |
| VA7 | Back View of Player's Gate |
| VA8 | Player's Gate Hinge |

PH3

- | | |
|------|---------------------------------------------------|
| VA9 | Back View of Double Leaf Equipment Gate Framework |
| VA10 | Back View of Double Leaf Equipment Gate Latch |
| VA11 | Back View of Double Leaf Equipment Gate Caster |

For Information Purposes

- | | |
|-----|------------------------------------|
| A1a | Existing Hockey Rink Layout/Detail |
| A1 | Floor Plan & Schedules |
| A2 | Side Wall Section Seating Details |
| A3 | Service Building Access Details |
| A5 | Miscellaneous Details |
| S1A | Piling Plan & Details |
| S5 | Entrance Concrete Plan Details |
| S6 | Concrete Plan & Sections |
| E1 | Distribution & Details |
| E2 | Power & Lighting Layout Details |

E2. PROJECT SEQUENCING

- E2.1 The Contractor is advised that the City anticipates sequencing as follows:
- (a) Design

- (i) The Contractor shall upon award of the Contract meet with the Contract Administrator to clarify and confirm the conceptual design submitted in the Contractor's proposal.
 - (ii) Review during the design phase is anticipated and will be negotiated at a rework meeting.
 - (iii) The Contractor shall submit drawings for review at the 75% stage and again at the 100% construction drawing and specification stage.
 - (iv) Approval in writing by the Contract Administrator shall be obtained before proceeding forward.
 - (v) The Contractor must obtain the Contract Administrator's approval prior to submitting the plans to the required agency for permits.
 - (vi) Approval must also be obtained from the Contract Administrator prior to making changes to any approved plans, specifications or work schedules.
- (b) Construction
 - (i) Installation of the hockey rink board system shall take place prior to the October 1, 2010 hockey season.
- (c) Commissioning
 - (i) Operation and Maintenance Manuals and staff training shall be completed prior to Substantial Performance.

E2.2 Key Project Contacts

- (a) The Contract Administrator shall be the contact for all project inquiries and co-ordination.
- (b) The Contract Administrator shall direct inquiries of a technical nature to the appropriate person.
- (c) The Contract Administrator shall act as a liaison to introduce the Contractor to the various authorities having jurisdiction over aspects of the project, and whose approvals will be required to install and operate the waterslide.

E3. DESIGN

E3.1 Design Services

- (a) The Contractor shall provide expert design services as required in order to:
 - (i) Obtain approvals from the necessary authorities having jurisdiction over the various aspects of the design and construction of the waterslide, including but not limited to:
 - (i) City of Winnipeg, Zoning and Permits Branch;
 - (ii) Other agencies as may be applicable.
 - (ii) Preparation of design drawings, specifications, documentation and instructions required for completion of the Work.
 - (iii) Design to meet or exceed the minimum standards set out in The City of Winnipeg Standard Construction Specifications.
- (b) Design Team Qualifications
 - (i) Utilize professionals where required by legislation.
 - (ii) A Professional Engineer registered to practice in the Province of Manitoba shall be responsible for all structural designs and shall seal all appropriate documents.
 - (iii) Utilize professionals expert in the appropriate field as required to design the Work.
- (c) Provide sealed drawings and specifications in accordance with local legislation.
- (d) Provide inspection services relative to each professional discipline and as otherwise required during construction and commissioning of the Work to ensure that the Work is constructed and operates in accordance with the drawings, specifications, documentation and instructions.
- (e) Provide written documentation of any changes to the intent of the design.

- (f) Provide certification of the Work as required by the necessary authorities.

E3.2 Guiding Principles

- (a) Vision – to design, construct and install a 200' x 85' standard hockey rink complete with new hockey rink boards, steel and wood framing, player's gates, penalty gates, player's boxes, penalty boxes, time keeper's box, double leaf equipment gate, self supported electric vertical lift gate, etc.
- (b) The hockey rink board construction should be constructed and durable to standards for competitive hockey leagues (Junior and Minor Leagues).
- (c) The new rink board system shall be constructed at the Terry Sawchuk Memorial Arena located at 901 Kimberly Street.
- (d) The design and construction of the new rink board system shall be constructed similar to that of Vimy Arena located at 255 Hamilton Avenue. Refer to Photos identified in Specifications E1.3.
- (e) The design of the hockey rink boards are intended to enhance the strength, durability, overall use and appearance of the hockey arena site.

E3.3 Existing Conditions

- (a) For information purposes, refer to Construction Drawings and Photos identified in Specifications E1.3 for the existing hockey rink layout, dimensions and construction details.

E3.4 Design Guidelines

E3.4.1 General Requirements

- (a) The design and construction shall be compliant with all Regulations and Codes as required by the relevant authority having jurisdiction over each aspect of the Work.
- (b) The design shall provide maximum safety for users of the indoor hockey rink.
- (c) **Rink board framework:** The steel framework shall be constructed of 3" x 3" x .083" vertical tubing welded to 8" x 6" x 3/4" steel base plates at 4'-0" o/c. Base plates to be bolted to existing concrete substrate at rink board sides only. The wood frame work shall be constructed of horizontal 2 x 8 pressure treated bottom boards, 2 x 6 spruce intermediate boards and 2 – 2 x 4 horizontal stringers at top board. The rink board ice side facing, kick plate boards, cap rails, player and penalty and timekeeper's box backer panels shall be constructed of 1/2" thick high density virgin polyethylene.
- (d) The new hockey rink board system and construction details shall meet the same requirements and standards as Vimy Arena located at 255 Hamilton Avenue. Refer to Photos identified in Specifications E1.3.
- (e) **Gates:** The access gates (3'-0" wide standard) and player gates (2'-6" wide) shall be right or left swing. The gate panel framing shall be the same construction as standard panels.
- (f) The gate latches shall be equipped with an adjustable spring loaded bolt mechanism so that the gate may be closed and latched in a single movement. The latch shall have a machined 5/8" solid steel rod extender attached between spring mechanism and a vertical handle made of 1/2" round steel. The handle is to be made so that a player wearing hockey gloves can easily open the gate. The latches must be a solid welded construction designed for their intended use. The catches for the spring latch shall have a stainless steel strike plate welded on the outer surface.
- (g) All gates with shielding must be equipped with a spring latch and push button release mechanism located in the cap rail, on the ice side of shielding, so that the gate can be opened from the ice side.
- (h) **Gate Schedule:** Four (4) – 30" player gates with standard spring latches; two (2) – 30" penalty gates with standard push button spring latches; one (1) – 30" timekeepers gate with standard spring latch and two (2) - 36" access gates with standard push button spring latches.

- (i) The hinges for all gates shall be two, lift off type, welded to the frame. All hinge assemblies shall have grease fittings for easy lubrication.
- (j) All single swing access and players gates shall have one 3/8" thick x 3 1/2" wide x 4 1/2" long door stop welded to the gate frame.
- (k) The thresholds for all player and penalty box gates shall be 9" above the finished floor level. The top of the steel frame is being 8" above the finished floor with a 1" thick polyethylene cover. Threshold of access gates shall be 3" above the finished floor level. The top of the steel frame is to be 2" above the finished floor with 1" thick polyethylene cover.
- (l) The equipment gates shall be a double leaf gates with 10'- 0" opening. The [equipment service gate](#) latch is to be the sliding bar type 2 1/4" x 2 1/4" x 12 gauge steel tubing with a large grasp handle. Each equipment gate shall lock into the steel threshold by means of 3/4" x 12" long cane bolts. Each equipment gate leaf over 36" in length shall be equipped with adjustable casters. Size of gate leafs to be determined by the Contract Administrator.
- (m) The equipment gate latch is to be the sliding bar type 2 1/4" x 2 1/4" x 12 gauge steel tubing with a large grasp handle. Each equipment gate shall lock into the steel threshold by means of 3/4" x 12" long cane bolts. Each equipment gate leaf over 36" in length shall be equipped with adjustable casters.
- (n) The equipment gates will be furnished with a steel threshold 1 1/4" high with a 1/2" white high density polyethylene cover.
- (o) **Equipment Gate Schedule:** 1 unit required 10' – 0" standard straight equipment gate.
- (p) **Hardware:** The steel hardware shall be galvanized or zinc plated for rust resistance after welding. The hardware shall include hinges, latches, nuts, bolts, washers and fastening devices necessary for installation.
- (q) **Zamboni Self Supported Vertical Electric Lift Gate:** 1 unit required – maximum opening height of 10 feet and maximum opening width of 10 feet radius electric Zamboni gate. It shall be constructed entirely of stainless steel components. The unit is anchored to the existing perimeter slab concrete. It shall be free standing towers and requires no mounting to additional support. Push button operation from control panel or hand held remote control. The door will fully open or close with a push of a button. A keyed 'lock-out" is mounted below the up-down-stop buttons to prevent unauthorized use. There shall be a 35 second travel time to full extension and automatic fail safe protection built in. In case of motor or power failure, the door can be operated manually with the pull of one lever or separate pull chain. The motor shall be of commercial grade 3/4 HP on single phase 220 volt (60 Hertz) power that has a built in brake that momentarily stops before switching directions. The balancing springs are flat wire.

Built in Safety Features: The vertical electric gate shall be equipped with an "infra red safety beam", which runs between the towers placed at 18" off the floor. If someone is standing between the towers, the Down button will not function. A flexible electric safety switch is mounted continuously on the underside of the door. If the door gently touches an object on the way down, it will stop and reverse up again. This electric switch is also heated with an internal heating cable. The lifting cables shall be 3/16" diameter stainless steel. Both carriages inside the towers are equipped with mechanical fail-safe brakes. If one lifting cable is cut, the brake locks into the side of the tower at 5" intervals; the maximum fall from any height equals 5" on that side.
- (r) **Rink facing panels:** The facing shall be 1/2" nominal thick high-density polyethylene. The stay white is to be furnished in a bright white colour. White must match within the manufacturer's tolerances. On panels that require red or blue lines, the facing will be routed 1/4" deep by the width necessary so that a 1/4" thick red or blue panel of high density polyethylene can be inserted into this area. The 1/2" stay white will be attached to the wood stringers with 1/4" – 20 x 1 1/4" Phillips flat head machine screws, flat washers and 1/4" nylon insert lock nuts. The heads of the screws are to be painted to

colour match the stay white facing. The spacing of the screws will not exceed 1'- 0" on center.

Cap Rails: The cap rail shall be constructed of ½" thick high density polyethylene and shall be fastened to the top horizontal 2 – 2 x 4 wood stringer members. The cap rail shall be furnished with a textured finish. The colour shall be gold. The heads of the screws are to be painted to colour match the cap rail. The spacing of the ¼" screws (two rows) will not exceed 24" on center. The front and back edges of the cap rail shall have smooth and chamfered edges. Cap rail is to overhang of steel frame by a minimum of 3/8" to allow for backer sheets to be installed at player, penalty and scorer's boxes.

Kick Plates: The kick plate shall be constructed of ½" thick high density polyethylene 8" high. The top of the kick plate shall have a ¼" radius. The colour shall be gold. The plate shall be fastened to the bottom of the boards using ¼" – 20 Phillips flat head machine screws, flat washers and nylon insert locking nuts. The heads of the screws are to be painted to colour match the kick plate.

Thresholds: The access and player gates shall have 1" thick high density polyethylene thresholds that can be removed and replaced when wearing occurs. The thresholds are to be fastened using ¼" – 20 x 1" Phillips flat head type "F" self tapping screws countersunk ½" deep to avoid contact with skate blades.

Player, Penalty & Scorer's Box Backer Panels: ½" high density polyethylene panels will be attached to the backside of the board framework in the player, penalty and scorer's boxes, including all personal gates and equipment gates. The panels shall be attached to the framework with ¼" – 20 x 1" Phillips flat head type "F" self tapping screws. A 3/8" plastic "H" channel shall be installed at every vertical seam of the backer panels. The colour of the backer sheets shall be white.

Player Box Storage Shelving: The front of the player box area shall be a shelf for the storage of player's water bottles. The shelf shall be completely lined with 3/8" polyethylene identical in colour to the backer panel material.

Timekeeper's/Scorer's Table: Construct one 1" x 18" x 4' solid polyethylene scorer's table installed in the scorer's box. The table shall be mounted to the back of the board system with brackets bolted to vertical strut channels welded into the backer panels, allowing table to be adjusted.

Spectator Shield Mounting Hardware: The spectator shield mounting supports shall be round in design of two piece construction made of solid architectural grade extruded aluminum (alloy #6005-T6) with 202R1 clear anodized finish. The back of the support shall be installed through a snug fitting contoured opening in the cap rail and secured at the bottom with a support mounting bracket to the center stringer of the rink board. The face plate of the support is to be attached to the back using ¼" x 1 ¼" self tapping screws. The installation of the glass panels shall be from the ice side of the rink, with the vertical support post within the dimensions of the boards. The supports shall be furnished complete with shield gaskets integrally attached to both the support post and the face plate. Total width of supports shall be not less than 2-1/8" in diameter nor exceed 2-1/2".

The round shield supports shall be attached at the center stringer using a "J" fitting that extends a minimum of 1-1/4" below the center stringer. The spectator shield supports are to be nominally 48" apart except at gates or similar openings in the rink boards. The contractor shall route a continuous channel in the top of the polyethylene cap rail to hold and support the shielding.

The gate shield mounting hardware shall be made of solid architectural grade extruded aluminum (alloy #6005-T6) with 202R1 clear anodized finish, it shall be of one piece to allow the operation of gate sections. The supports to be furnished complete with integrally attached shield gaskets.

The minimum height of the supports shall be 48" (4 foot) above the cap rail on the sides of the rink where the 48" (4 foot) high shielding is indicated. The minimum height of the supports shall be 60" (5 foot) above the cap rail on the rink ends and

corners where the 60" high shielding is indicated. Re-use existing 60" high tempered glass shielding at the ends of the rink and radius corners as indicated.

- (s) **Tempered Glass Spectator Shielding:** The spectator shielding shall be clear float safety tempered glass. The shields shall have the top two corners radiused and all edges ground to minimize breakage and for safety in handling. The shields shall be nominal 48" wide except those at gates, removable sections, or similar openings in the rink boards. The height of the spectator shielding at the sides of the rink to be 48" above the rink board panels. The tempered glass shields on the sides of the rink to be ½" thick. Re-use the existing 60" high tempered glass spectator shielding at the ends and radius corners of the rink board panels. The tempered glass shields on the ends and radius corners to be 5/8" thick. Re-install the existing protective safety netting to the tempered glass shielding at sides, ends and corners.

The spectator shields supports and shields shall be installed across the front and sides of the scorer's box and at both ends of the players boxes.

- (t) **Player, Penalty, and Official's Boxes:** The player boxes shall consist of two team boxes, two penalty boxes and one officials/timekeeper box. The spectator shielding shall be installed behind and along side of but not in front of team boxes. Spectator shielding shall be installed behind, along side of and in front of officials and penalty boxes.
- (u) **Rubber Flooring:** The existing concrete substrate floor surfaces in the player, penalty and timekeeper's boxes shall be covered with 100% solid recycled rubber flooring, ½" thick, smooth face style, 4 foot lengths and black in colour. Rubber flooring shall be revulcanized, non-absorbent, slip resistant and easily cleaned. Construction of elevated flooring will not be required.
- (v) **Benches:** The benches used in the players and penalty box areas will be made of 1" thick x 9'-1/2" wide textured high density polyethylene. A formed steel channel frame shall be used to support benches. Colour must match the cap rail material. The player's box benches shall be 30'-0" length by 5'-0" foot depth and the penalty box benches shall be 9'-0" length by 5'-6" depth. The time keeper's box shall be 6'-0" length by 5'-6" depth. The top edges of the benches will have a 3/8" radius and a ¼" radius on the bottom edges.
- (w) **Adjustments:** Put all items of equipment and systems through at least five complete cycles of operation, verifying that each item is properly installed and operating properly.
- (x) **Project Clean Up:** The contractor shall be responsible for clean up of all construction debris and cleaning of the rink board system prior to project completion.
- (y) **Raised Coaches Walkway:** In the players area an optional two-tier framework can be fabricated for a coach's walkway behind the benches. The coach's walkway will be elevated 7" above standard floor height and will be 18" deep.

E3.4.2 Operational Expectations

- (a) **Hours of Operation:**
 - (i) Seven (7) days per week for 8 months per year;
 - (ii) Daily hours: 3:00 p.m. – midnight (Weekdays); 7:00 p.m. – midnight (weekends)

E4. CONSTRUCTION

E4.1 General

- (a) Unless otherwise stated, the Contractor shall furnish all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified and in accordance with the referenced standard City specification and construction details.

- (b) The Contractor shall construct the Works in accordance with the design produced in accordance with Clause E3.
- (c) Construction materials, methods and procedures shall be performed in accordance with the standards set out in The City of Winnipeg Standard Construction Specifications.
- (d) The Contractor shall document and advise the Contract Administrator of any alteration, modifications, deletions, or substitutions to the approved design prior to incorporating said alterations, modifications, deletions or substitutions into the Work.
- (e) All workmanship and all materials furnished and supplied under this contract are subject to the close and systematic inspection and testing by the Contract Administrator including all operations from the selection and production of materials through to final acceptance of the Work. The Contractor shall be wholly responsible for the control of all operations incidental there to notwithstanding any inspection or approval that may have been previously given. The Contract Administrator reserves the right to reject any materials or works, which are not in accordance with the requirements of this Contract.
- (f) The Contractor shall perform selective demolition as specified in the design and in accordance with local regulations relative to the disposal of waste materials.

E4.2 Shop Drawings

- (a) Shop Drawings to be reviewed by the design professional responsible for the design, prior to submitting to the Contract Administrator.
- (b) Submit, shop drawings and equipment catalogue data and manufacturer's installation operating and maintenance instructions for approval of the following items:
 - (i) Structural members, supports, and braces
 - (ii) Prefabricated sections, structural steel or aluminum sections
 - (iii) Electrical grounding/protection equipment
 - (iv) Cutting and concrete details

E4.3 Record Drawings

- (a) The Contractor shall keep on the Site one (1) up-to-date copy of all specifications, drawings and bulletins pertaining to the Work, in good order, available to the Contract Administrator and to his representative.
- (b) Such specifications and drawings shall be marked by the Contractor to show all Work "As-Built" as Work proceeds. The Contractor shall modify the Drawings to "As-Built" bearing notations of all changes and variations from the original and submit these to the Contract Administrator for approval.
- (c) If required, in the opinion of the Contract Administrator, further revisions will be made to the Drawings by the Contractor until the Drawings are accepted by the Contract Administrator.
- (d) Accuracy of these drawings shall be the responsibility of the Contractor, who shall bear all expenses of corrections thereto.
- (e) Said drawings will be provided to the Contract Administrator during the Commissioning state of the project.

E5. COMMISSIONING

E5.1 Operation and Maintenance Manuals

- (a) The Contractor shall provide in a format acceptable to the Contract Administrator three (3) bound copies as well as one electronic copy detailing the operation and maintenance instructions for all elements of the construction including:
 - (i) Manufacturers' written instructions, warranties, shop drawings, schedules, and listing of persons to contract for repairs during the warranty period.
 - (ii) Descriptions of preventative maintenance, annual and periodic maintenance, and procedures for seasonal shutdown and start-up.