



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 379-2011

**ELEVATOR MODERNIZATION – CITY HALL ADMINISTRATION BUILDING – 510
MAIN STREET**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 ELEVATOR MODERNIZATION – CITY HALL ADMINISTRATION BUILDING – 510 MAIN STREET

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, July 29th, 2011.

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 Contract Administrator or an authorized representative will be available at the Site from 10:00 a.m. to 12:00 noon on June 30th, 2011 to provide Bidders access to the Site.

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

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.

B4.2 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.

B4.3 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.

B4.4 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.

B4.5 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.

B5. ADDENDA

B5.1 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.

B5.2 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.

B5.2.1 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>

- B5.2.2 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.
- B5.2.3 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.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 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.
- B6.4 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.
- B6.5 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.
- B6.6 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.
- B6.6.1 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.
- B6.7 If the Contract Administrator approves a substitute as an "approved equal", any Bidder may use the approved equal in place of the specified item.
- B6.8 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 B14.
- B6.9 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.

B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

B7. BID COMPONENTS

B7.1 The Bid shall consist of the following components:

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

B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.

B7.3 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.

B7.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.

B7.5 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

B7.5.1 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.

B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.

B7.7 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 B14.1(a).

B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.

B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.

B7.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B8. BID

B8.1 The Bidder shall complete Form A: Bid, making all required entries.

B8.2 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.

B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

B8.3 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.

B8.4 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.

B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B8.4.2 All signatures shall be original.

B8.5 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.

B9. PRICES

B9.1 The Bidder shall state a price in Canadian funds for each item of Work identified on Form B: Prices.

B9.2 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.

B9.3 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.

B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10. QUALIFICATION

B10.1 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.

B10.2 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>

B10.3 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);

B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractors has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>).

B10.5 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.

B10.6 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.

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

B11.1 Bids will not be opened publicly.

B11.2 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>

B11.3 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>

B11.4 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.

B12. IRREVOCABLE BID

B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B12.2 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.

B13. WITHDRAWAL OF BIDS

B13.1 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.

B13.1.1 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.

B13.1.2 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.

B13.1.3 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 B13.1.3(b), declare the Bid withdrawn.

B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 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.

B14. EVALUATION OF BIDS

B14.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B9.2 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B6.

B14.2 Further to B14.1(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.

B14.3 Further to B14.1(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.

B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B14.4.2 Further to B14.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B15. AWARD OF CONTRACT

B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B15.2 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.

B15.2.1 Without limiting the generality of B15.2, 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.

B15.3 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 B14.

B15.3.1 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.

B15.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.

B15.5 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.

B15.6 Upon award of Bid Opportunity 379-2011 the existing Full Maintenance Service will be terminated for this location as per E18.1 of Bid Opportunity 698-2008.

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 modernization of three (3) elevators and five (5) year Full Maintenance Service agreement

D2.2 The major components of the Work are as follows:

- (a) Modernization of three (3) elevators at The City Of Winnipeg Administration Building – 510 Main Street.
- (b) Five (5) year Full Maintenance Service agreement.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is:

Stan Russell
Supervisor of Project Services
4th Floor, 185 King Street, Winnipeg Manitoba, R3B 1J1
Telephone No. (204) 794-4418
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. CONTRACTOR'S SUPERVISOR

D4.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D5. NOTICES

D5.1 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.

D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 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.

D5.3 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 facsimile number:

The City of Winnipeg
Chief Financial Officer
Facsimile No.: (204) 949-1174

- D5.4 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
Legal Services Department
Attn: Director of Legal Services
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.

D7. SAFE WORK PLAN

- D7.1 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.
- D7.2 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>

D8. INSURANCE

- D8.1 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 installation floater, carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D8.2 Deductibles shall be borne by the Contractor.
- D8.3 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.
- D8.4 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.

D9. PERFORMANCE SECURITY

- D9.1 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.
- D9.1.1 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.
- D9.2 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.

D10. SUBCONTRACTOR LIST

- D10.1 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.

D11. SECURITY CLEARANCE

- D11.1 Each individual proposed to perform Work under the Contract shall be required to obtain a Criminal Record Search Certificate from the police service having jurisdiction at his place of residence.
- D11.2 The Criminal Record Search shall include a Vulnerable Sector Search. This can be obtained by completing and providing the following in person to the Winnipeg Police Service Bureau of Police Records, 4th Floor, 151 Princess Street:
- (a) Form P-612 Check the following boxes: Vulnerable Sector; and Other by inputting the Bid Opportunity Number in the space provided. This form can be found on the website at: www.winnipeg.ca/police/BPR/forms/Criminal_Record_Check_P612.doc
 - (i) Individuals will need to state in Section 2 of the form, that they may be working in City of Winnipeg pools, libraries and community centres;
 - (ii) Individuals will need to sign and date Section 3 of the form.
 - (b) Two (2) pieces of identification as stated in Bureau of Police Records on the website at: www.winnipeg.ca/police/BPR/id.stm
 - (c) Fee for each individual applying for a Criminal Record Search. Fee schedule can be found on the website at: www.winnipeg.ca/police/BPR/fees.stm
- D11.2.1 The original Criminal Record Search Certificate (Form P-253) will be provided by the Winnipeg Police Service to the individual applicant. The original has a validation sticker from the Winnipeg Police Service in the top right hand corner. The applicant shall:

- (a) Provide the original Criminal Record Search Certificate (Form P-253) to the Contract Administrator.

- D11.3 Prior to the commencement of any Work, and during the term of the Contract if additional or replacement individuals are proposed to perform Work, the Contractor shall supply the Contract Administrator with a Criminal Record Search Certificate obtained not earlier than one (1) year prior to the Submission Deadline, or a certified true copy thereof, for each individual proposed to perform Work.
- D11.4 Any individual for whom a Criminal Record Search Certificate is not provided, or for whom a Criminal Record Search Certificate indicates any convictions or pending charges related to property offences or crimes against another person, will not be permitted to perform any Work.
- D11.5 Any Criminal Record Search Certificate obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.
- D11.6 Notwithstanding the foregoing, at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated criminal records search. Any individual who fails to provide a satisfactory Criminal Record Search Certificate as a result of a repeated criminal records search will not be permitted to continue to perform any Work.

SCHEDULE OF WORK

D12. COMMENCEMENT

- D12.1 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.
- D12.2 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 D6;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D7;
 - (iv) evidence of the insurance specified in D8;
 - (v) the performance security specified in D9;
 - (vi) the Subcontractor list specified in D10;
 - (vii) the security clearances specified in D11.
 - (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.
- D12.3 The Contractor shall not commence the Work on the Site before August 31st, 2011 .
- D12.4 The City intends to award this Contract by August 31st, 2011
- D12.4.1 If the actual date of award is later than the intended date, the dates specified for, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D13. SUBSTANTIAL PERFORMANCE

- D13.1 The Contractor shall achieve Substantial Performance by November 1st, 2012.
- D13.2 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.

D13.3 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.

D14. TOTAL PERFORMANCE

D14.1 The Contractor shall achieve Total Performance by December 14th, 2012.

D14.2 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.

D14.3 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.

D15. LIQUIDATED DAMAGES

D15.1 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 one hundred dollars (\$100.00) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.

D15.2 The amount specified for liquidated damages in D15.1 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.

D15.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D16. JOB MEETINGS

D16.1 Regular monthly 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.

D16.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

MEASUREMENT AND PAYMENT

D17. PAYMENT

D17.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D18. WARRANTY

- D18.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter, except where longer warranty periods are specified in the respective Specification sections, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

FORM H1: PERFORMANCE BOND
(See D9)

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. 379-2011

ELEVATOR MODERNIZATION – CITY HALL ADMINISTRATION BUILDING – 510 MAIN STREET

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)

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**
(See D9)

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 379-2011

ELEVATOR MODERNIZATION – CITY HALL ADMINISTRATION BUILDING – 510 MAIN
STREET

Pursuant to the request of and for the account of our customer,

(Name of Contractor)

(Address of Contractor)

WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exceeding in the aggregate

_____ Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

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)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS

- E1.1 These Specifications shall apply to the Work.
- E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:

GENERAL

E2. DESCRIPTION:

- E2.1 General Requirements: specified under of these Specifications shall apply to and form an integral part of this Section's work as applicable.

E3. ALL WORK:

- E3.1 In all cases where a device or part of the equipment is referred to in the singular number, provide as many such devices of equipment as are required to complete all Work of the Section.

E4. SCOPE:

- E4.1 This specification is intended to cover the complete furnishing and installing of all labour and materials required to modernize two gearless traction passenger elevators and one geared traction service elevator located in the City of Winnipeg City Hall Administration Building, 510 Main Street, Winnipeg, Manitoba as detailed. All Work shall be performed in a workmanlike manner and is to include all Work and material in accordance with the drawings and as specified herein.
- E4.2 The existing equipment consists of two variable voltage gearless traction passenger elevators with group supervisory control and one variable voltage geared traction service elevator with selective-collective control. The original equipment was manufactured and installed by Otis Elevator in 1963. The two passenger elevators are Otis Sales Number 395022 and 395023, licensed as DoL Installation Numbers P-842 and P-843. The service elevator is Otis Sales Number 395024, licensed as DoL Installation Number P-484. The original layout drawings for these installations are available for review by making an appointment with the Contract Administrator listed in D3.

E5. CONTINUITY OF SERVICE:

- E5.1 Schedule the Work so that no more than one car is out of service at any time. If it becomes necessary to shut down a group of elevators, schedule the service outage with the Contract Administrator in advance of the planned shut-down.

E6. CODES & INSPECTIONS:

E6.1 All Work shall be performed in accordance with the latest revised edition (as of the date bids close) of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators, the Canadian Standards Association Electrical Code, the Universal Access Code, the City of Winnipeg Universal Design Accessibility Design Standards and/or such Provincial and Local Codes as may be applicable. The Elevator Contractor will register the Work with the Manitoba Department of Labour as an alteration and obtain and pay for all government permits and licenses and inspection fees.

E7. DRAWINGS:

E7.1 The Elevator Contractor shall submit three (3) sets of shop drawings to Contract Administrator in accordance with the requirements specified in the General Conditions showing the arrangement of the new controllers, car and hall fixtures and the new car cab and entrance finishes.

E7.2 The City will provide one copy of the general arrangement drawing for the existing passenger and service elevator equipment, attached to this Specification Package. Modify these layout drawings to reflect the Work being added or altered under this contract. Register the layout drawings for the modernized elevators with the Department of Labour. The revised drawings shall bear the stamp of a Professional Engineer registered in the Province where the installation is taking place.

E7.3 Approval of the drawings (and other approval forms submitted by the contractor) shall in no way limit the responsibility of the contractor to provide a complete installation in accordance with the requirements of this specification.

E8. DOCUMENTS ON SITE:

E8.1 Maintain on Site a complete set of contract specifications and drawings, including all Addenda incorporated into the specification text at the appropriate place, for the use of your mechanic and the City.

E9. WARRANTY:

E9.1 The Elevator Contractor shall warrant the equipment installed by him under these specifications against defects in materials and workmanship, and will correct any defect not due to ordinary wear or tear or improper use or care which may develop within one year from the date of the City's final acceptance of complete elevator modernization for all three elevators, with all deficiencies remedied.

E10. STORAGE:

E10.1 The City will provide a modest amount of protected storage space on the basement floor of the building for the storage of the Contractor's tools and materials. There may not be sufficient space to store the entire material and some materials may have to be stored off site at the Contractor's expense until needed. Security of all stored materials and tools shall be the responsibility of the Contractor.

E11. MAINTENANCE SERVICE:

E11.1 The Elevator Contractor shall furnish maintenance and call-back service on the entire elevator installation for a period of twelve (12) months after the entire modernization has been completed and has received the Contract Administrator's final acceptance, with all deficiencies remedied.

E11.2 Provide interim maintenance on all elevators beginning upon award of Contract and continuing until all three elevators have been completed and received the Contract Administrator's final acceptance.

- E11.3 This maintenance service shall consist of regularly scheduled monthly examinations of the equipment, adjustments, lubrication, cleaning, supplies and parts to keep the equipment in proper operation, except such adjustments, parts or repairs made necessary by abuse or misuse. All scheduled Work will be done during the regular working hours of the building.
- E11.4 Provide, in addition, regular time call-back service to correct any fault which may develop between scheduled visits.
- E11.5 Provide and maintain on Site or within a reasonable distance of the Site a complete stock of replacement parts, including solid state cards specific to this installation, as required to keep the elevator in running condition at all times. Provide, during regular working hours, sufficient trained personnel to respond to an unscheduled service call by arriving on Site within one-half hour of when then request for service was placed.
- E11.6 The City will provide a logbook to be kept in the Elevator Machine Room. Record in the City's logbook the detail of each maintenance visit to the Site. Record each routine scheduled maintenance inspection, a description of Work completed and a listing of any parts replaced. In the event of a call-back, record the reported failure, the finding of the mechanic and the remedial action taken to correct the fault, including a listing of any parts replaced. This logbook shall remain the property of the City and shall remain on Site at all times.
- E11.7 Provide, as, shown on Form B: Prices a price to provide continuing full maintenance contract to begin upon expiry of the twelve month guarantee maintenance period and to continue until December 31, 2016. The on-going maintenance contract shall be in accordance with the City of Winnipeg Standard Construction Specifications for elevator maintenance. State a price per month for each year of the contract on the Form B: Prices.

E12. THIS CONTRACT DOES NOT INCLUDE THE FOLLOWING WORK WHICH WILL BE PERFORMED BY THE CITY.

- (a) Provide a cut-out in the polished granite wall finish at the James street entrance adjacent to the existing fire panel to accommodate the new telephone equipment in a flush installation.
- (b) Remove the existing ash trays from the Main and 2nd floor elevator lobbies.
- (c) Completely refinish the wood rear and side walls of passenger Elevators #1 and #2.
- (d) Paint the existing landing entrance frames, doors, transoms and light diffusers on the typical floors (Basement plus 3rd to 7th) plus the car doors of Elevator #3.
- (e) Furnish, during installation, power of necessary characteristics to provide illumination, operation of required tools and hoist, and for testing and adjusting the elevator and signal equipment.
- (f) Retain and reuse the existing electric feed wires for each elevator machine. Provide new lockable main line fused disconnect switches or circuit breakers, sized to accommodate a 33 horse power motor for each passenger elevator and a 34 horse power motor for the service elevator. Extend wiring from the new disconnect switches to the terminals of new each elevator control panel.
- (g) Retain and reuse the existing separate 120 volts 15 amp lighting branch circuit with circuit breakers in the machine room. Extend wiring to the terminals of each new control panel.
- (h) Provide empty conduit for the telephone lines required to connect the elevator cars and elevator machine room telephones to the new Rescue Station. Provide one empty conduit to run from the passenger elevator hoistway to the Rescue Station to be located James Street entrance lobby. The Elevator Contractor will then bring all telephone wiring from the elevator telephone equipment to the existing telephone line connection in the elevator machine room.
- (i) Retain the existing Emergency Power Generator which is of adequate size to run one elevator only at a time.

- (j) Retain the existing throw-over switch on the Emergency Power Generator complete with an auxiliary contact providing a normally closed circuit. Terminate this circuit at studs on one passenger elevator controller.
- (k) Furnish, for use with the new Firefighters' Emergency Operation, two normally closed circuits from the fire alarm panel to studs on one elevator controller, one circuit to send the car to the designated level in the event of a general fire alarm, one to send the car to the alternate recall level should the fire alarm indicate a fire at the designated level. Provide, in addition, similar signals from the fire alarm panel to one elevator controller, one to signify a fire in the elevator hoistway and one to signify a fire in the elevator machine room.
- (l) Remove and dispose of the existing pit light fixtures with new double fluorescent lighting fixtures with T8 low power consumption ballasts complete with wire guards.
- (m) Remove and dispose of the existing duplex outlets and provide new permanent dedicated "ground fault interrupter" duplex outlet in each pit and in the machine room.
- (n) Provide one card reader for each of the three elevators.
- (o) Provide signals from the card reader controller consisting of either one relay with normally-closed dry contact for each floor served, except for the Main floor or alternately one wire with no line voltage (secure position is either the open contact of the relay or 24 volts signal line voltage). (In the event of failure of the card reader system, all car calls will be allowed.) Mount these relays or terminate the signal wires in a suitable electrical box mounted on the outside of each elevator controller in the elevator machine room. Provide wiring from this electrical box to the card reader controller and back so as to receive signals from the card readers and send back power to operate the authorized relays.

GEARLESS PASSENGER ELEVATORS - DESCRIPTION OF EQUIPMENT AND WORK:

E13. EXISTING CONDITIONS

- E13.1 The hoistway, pit and machine room are all existing and shall be reused in their present condition.
- E13.2 The three-phase power supply to each car, single-phase power supply to each car, emergency power supply including signal from the transfer switch are all existing and shall be reused in their present condition.

E14. PROTECTION OF HOISTWAYS

- E14.1 Provide temporary enclosures or other suitable protection for open elevator hoistway during the time the elevator is being installed. Also provide separation between hoistways as required to protect workers during installation.

E15. CAPACITY

- E15.1 Maintain the existing capacity of 3000 pounds exclusive of car and cables.

E16. STOPS AND OPENINGS

- E16.1 Maintain the existing seven stops and seven front openings at Basement to 6th floor.

E17. SPEED

- E17.1 Maintain the existing speed of 500 fpm under full load.

E18. CONTROL:

- E18.1 Remove and dispose of the existing controllers and replace them with new controllers. The controllers shall be microprocessor-based and incorporate both speed control and dispatching logic.
- E18.2 Provide Magnetek "Quattro" PWM-DC regenerative motor control employing solid state devices to vary the voltage and the current applied to the existing DC drive motors to produce smooth acceleration and slow-down and ensure consistent level stops in both the UP and the Down direction. Use a closed-loop feed-back system to constantly monitor the speed of the car and instantaneously adjust it so that it constantly matches a pre-programmed and adjustable speed curve pattern. Employ a feedback monitoring speed regulation system which will ensure consistent speed pattern regardless of fluctuations in the power supply to the car, weight in the car, direction of travel, machine room temperature and all other variables affecting the speed of the car. Include on the Quattro speed control a "Low Voltage Field Module" to match the supply voltage with the field voltage so as to improve the longevity of the field coils.
- Include provision such that when the car is decelerating, the power generated by the D C motors is not bled off into heat-dissipating resistors but is fed back into the building suitable for use by other building components. Regenerated power should have a power factor of over 0.95 and clean harmonics so as not to cause interference with the building power supply. Provide, as part of the speed control, an autotransformer to step the supply line voltage down from 575 Volts to 480 volts.
- E18.3 Provide automatic levelling and re-levelling to maintain the car within ¼" of floor level regardless of the load in the car.

E19. DUPLEX SELECTIVE COLLECTIVE OPERATION:

- E19.1 Provide Duplex selective collective operation with solid state "memory" control, single push buttons at each terminal floor and UP-DOWN push buttons at each intermediate floor, all set at wheelchair height; dispatch cars to service car and hall calls in the most efficient manner; arrange control so that only one car is dispatched to answer any hall call; automatic levelling and re-levelling; furnish a keyed independent service switch in car to permit uninterrupted service use of the elevator
- E19.2 Provide written proof that you have not provided a control programmed to shut the elevator down after a pre-determined amount of time or number of trips whereby a special proprietary code or device must be applied to the control. If such a feature is provided with the control supplied, provide, in addition, the proprietary device required to restart the elevator plus written instructions on how to use the restart device.
- E19.3 Include the following features as a minimum standard: high call reversal and anti-nuisance feature (triggered by either the weight-sensitive floor where the number of calls registered is disproportional to the weight in the car or by the photo-cell door protection device where two consecutive stops are made with no passengers entering or leaving the car), car call cancellation upon reversal of direction and disbursed car parking.
- E19.4 Include a `next car up` feature. When a car arrives at the Main floor with an UP direction, illuminate its UP Hall Lantern and hold it at the Main floor with its doors open and the UP hall lantern illuminated, either for an adjustable amount of time or until a car call has been registered.
- E19.5 Provide single push buttons at each terminal floor and UP-DOWN push buttons at each intermediate floor, all set at wheelchair height.
- E19.6 Arrange that the door open time for a stop in response to a car call shall be independently adjustable from the door open time for a stop in response to a hall call. Initially, set the door open time for both car and hall calls at 8.0 seconds (special Universal Design requirement).

E20. INDEPENDENT SERVICE:

E20.1 Provide a two-position keyed switch in the Service Cabinet marked "INDEPENDENT SERVICE". With the switch in the "ON" position, the elevator will not respond to hall calls but will stop for car calls only. The hall calls shall be distributed to the other car while the car is on Independent Service. When the elevator stops at a floor, it shall park with its doors open and the doors shall close only when constant pressure is applied to the DOOR CLOSE button.

E21. CARD READER SYSTEM:

E21.1 The card reader system on the elevators is to be integrated into the PegaSys security system presently being installed in the building. Others will provide one card reader for each elevator car. Mount the card reader adjacent to the Main Car Operating Station. Arrange that, when floor security is in effect, as determined by the card reader controller provided as part of the PegaSys security card reader system, access to all floors except the Main floor will be controlled by the card access system. Provide a suitable cable consisting of six shielded 18AWG conductors running from the card reader in each car to the elevator machine room. Wire the car calls through the card reader relays such that when no security is in effect, the relays for all floors will be normally closed or a signal line voltage of 0 Volts DC will be provided by the card reader controller and all car calls will register as normal. When floor access security is in effect, all relay contacts will open, thus preventing car calls from being registered or a signal voltage of 24 Volts DC will be provided. When a valid card is swiped, the card access controller will close the contacts for the floors or drop the signal line voltage for floors for which that card has authorized access. The authorized contacts will remain closed and the signal line voltage reduced to 0 for approximately five seconds and during this time car calls for the authorized floors may be registered. After five seconds when the contacts again open or the signal line voltage returns to 24 Volts DC, allow the call registered light to remain illuminated until the call is answered (but blocking further car calls).

E22. MAIN FLOOR KEYED SWITCHES:

E22.1 Retain and re-use the existing keyed switches at the Main floor lobby. Arrange that when the ELEVATOR STOP – START switch is moved to the STOP position, that elevator will home to the Main floor and then park with its doors closed and its Hall Position Indicator turned off. When the switch is moved to the START position, return that elevator to normal automatic operation.

E22.2 Arrange that when the BASEMENT ON – OFF switch is in the OFF position, car calls to the Basement floor will not register.

E23. ADJUSTER'S MANUAL:

E23.1 Provide a complete adjuster's manual with the installation. The adjuster's manual shall detail which operational parameters are software selectable and which are hardware controlled. Provide a description of how to adjust these parameters and their initial values. Provide as part of the installation a field diagnostic and adjustment tool suitable to troubleshoot the elevator and re-tune the installation should the controller lose all its memory or in order to change parameters which are held in software.

E24. BACK-UP SUPPLY OF SOLID STATE BOARDS:

E24.1 Include one duplicate of each solid state card used in the installation complete with all chips in place on the card, such that any card may be substituted into the controller and the elevator continue to operate normally. Deliver these cards to the Project Co-ordinator and obtain written acceptance of the cards.

E25. DRIVE MOTOR:

E25.1 Retain the existing D C hoist machine drive motor, as described in this specification. Remove and rewind the field coils to ensure compatibility with the new Quattro speed control motor drive.

E26. DRIVE SHEAVE AND CABLE GUARDS:

E26.1 Provide substantial guards to protect maintenance personnel from exposure to the hoist cables and moving parts of the hoist machine.

E27. ROPE BRAKE:

E27.1 Provide a rope brake complete with enabling circuits to prevent the elevator car from overspeeding in the UP as well as the DOWN direction. Also provide circuits to monitor the position of the car within the hoistway so that, if the car travels outside the door zone with its doors open, the rope brake will be applied.

E28. GOVERNOR:

E28.1 Remove and dispose of the existing governor and replace it with a new governor, arranged to monitor the speed of the car in both the UP and the DOWN direction. Provide, in addition, the ability to sense when the car is beginning to overspeed.

E28.2 Provide enabling circuits such that, when the car has exceeded its normal operating speed but before it reaches its governor tripping speed, the control shall cause the elevator to travel at reduced speed, stop at the next available floor and shut down with its doors open. Restore the car to automatic operation by cycling the main line switch (after correcting the reason for the overspeed condition).

E28.3 Provide suitable guards to protect maintenance personnel from exposure to the governor cable and moving parts of the governor.

E29. CAR SAFETY:

E29.1 Dismantle, clean, adjust and lubricate the car safeties and safety linkages to ensure consistent application of the car safeties in the event the car encounters an overspeed condition.

E30. LIFT ROPES:

E30.1 Remove and dispose of the existing lift cables from the car and replace them with new lift cables, maintaining the same number and diameter of cables. Ensure that the total factor of safety of the new cable system is the same as or greater than the original cables. Do not use lift cables with a hardness which may damage the existing machine and deflector sheaves.

E30.2 If the new ropes supplied are different in material or grade (or number or diameter) from the existing ropes, provide certification from a licensed professional engineer that the material of the existing sheaves is satisfactory for the revised application.

E30.3 Provide tags to confirm the date when the ropes were replaced.

E30.4 Empty car weight is provided on the original layout drawing included with this Bid Opportunity specification package.

E31. WEDGE CLAMPS:

E31.1 The existing wedge clamp terminations may be re-used (at the elevator contractor's discretion) for the new lift cables.

E31.2 Properly equalize the tension in each cable to ensure long-wearing characteristics in the new cables.

E32. GOVERNOR ROPE:

E32.1 Remove and dispose of the existing governor cable and replace it with a new governor cable sized to suit the new governor.

E32.2 Provide a rope tag to confirm the date when the governor rope was replaced.

E33. ELECTRICAL WIRING:

E33.1 The existing power supply is 575 Volts 3 Phase fused at 125 amps. If the new equipment will require a smaller fuse size, supply and install new fuses of suitable size in the disconnect switch. If the new equipment will require a larger fuse size, the elevator contractor must include in his quotation all costs associated with increasing the size of the power supply from the splitter panel in the Basement electrical room to the elevator controllers.

E33.2 Supply and install complete new wiring for the entire installation, including machine room wiring, fixed hoistway wiring and travelling cable.

E33.3 Provide a waterproof and greaseproof covering for the travelling cable. Run the travelling cable in a continuous run from the car to the controller in the elevator machine room without a half-way junction box. Provide shielded wire in the travelling cable for the telephone and terminate this wiring for each elevator in the new Rescue Station specified in Clause E40.3 and located in the James Street Main floor entrance lobby.

E33.4 Provide at least 20% spare wires beyond that required for all components presently in the system. Terminate the spare wires at each end of their run on properly labelled terminal blocks.

E34. HOISTWAY SWITCHES:

E34.1 Provide new slow-down, direction, terminal and limit switches in the hoistway. Replace the existing STOP switches in each pit.

E35. HOISTWAY ACCESS:

E35.1 Provide hoistway access keyed switches at the Basement (bottom) and 6th (top) landings complete with enabling circuits on the controller to permit access to the pit and top of the car.

E36. STOP SWITCH IN OVERHEAD SPACE:

E36.1 Supply and install a new Stop Switch in the hoistway within reach of the top floor landing entrance.

E37. TOP-OF-CAR INSPECTION:

E37.1 Provide a new top-of-car inspection station.

E37.2 Ensure that the complete operation of the top-of-car inspection station complies with 2.26.1.4 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.



Existing Car Top Station

E38. NEW MAIN AND AUXILIARY CAR STATIONS:

- E38.1 Remove and dispose of the existing main and auxiliary car stations from the car and provide new main and auxiliary car stations. Include a lockable Firefighter's Emergency Service panel at the top of the main car operating station and also incorporate the hands-free telephone specified in Clause E40.1. Provide a lockable Service Cabinet at the top of the auxiliary car station.
- E38.2 Arrange the car operating buttons at the bottom of the car stations and arrange the floor buttons in accordance with the requirements of Appendix E of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators except that the highest button shall be not more than 47 inches above the floor. Provide buttons with a minimum 1 full inch diameter pressel (this is larger than the Appendix E requirement). Provide Dupar US91CC Optic design push buttons with illuminating fishtail Braille and tactile markings to the left of each button. Arrange the push buttons so that both the tactile plate and the button surround are normally illuminated in white. When a car call is registered, change the illumination of both the tactile plate and the button surround to blue.
- E38.3 Mount the lowest car button at 35" above the floor and provide an extended faceplate to approximately 6'-6" to cover the old cut-out (approximate height of 79" above the car floor) and to accommodate the new Car Position Indicator.



Height aff of existing Car Station Coverplate



Bottom of existing Car Station Coverplate



Width of existing Car Station Coverplate

- E38.4 Provide LED illumination for call-registered lights in the car call and ALARM buttons and audible call registered buzzer.
 - E38.5 Incorporate a new certificate holder into the auxiliary car station.
 - E38.6 Engrave the elevator number E1 or E2 into the car station with lettering 25 mm. high.
 - E38.7 Provide the main and auxiliary car stations, complete with buttons and Braille tags, in mirror finish brass.
 - E38.8 Provide the Firefighter's Cabinet, Service Cabinet and telephone completely flush-mounted and vandal-proof.
- E39. VOICE ANNUNCIATOR:**
- E39.1 Provide a voice annunciator for each elevator. Arrange the voice annunciator to announce the floor name each time the elevator stops at a floor, the direction of travel of the next trip and special advisory messages such as instructions to clear the doorway, announcement of a fire alarm, etc. Provide a quality speaker such that the voice annunciator can be clearly understood anywhere in the cab. Provide a volume control, mounted in the Service Cabinet.

E40. TELEPHONE:

- E40.1 Supply and install a hands-free AutoDial telephone Style OEM-150 manufactured by Webb Electronics, mounted integral with the main car station for a completely flush installation. Do not provide a telephone cabinet or mount the phone coverplate proud of the car station cover plate. Provide a push button in the car station with the telephone symbol. Provide perforations in the car station cover plate for the telephone microphone and speaker so that the telephone is completely vandal-resistant. Arrange that when the telephone push button is pressed, the phone automatically initiates a call through the Rescue Station. Provide a quality telephone such that clear communication is provided for the passengers from any point in the car. Arrange the phone to automatically hang up when the other party hangs up to allow further calls to be placed. Arrange that the phone can receive calls from outside the car and can confirm to the telephone operator the location of the elevator.
- E40.2 Wire each car telephone into the Rescue Station specified below.
- E40.3 Provide one LS-250 Rescue Station manufactured by Webb Electronics, to be mounted adjacent to the Fire Alarm Panel at the James Street Main Floor entrance lobby. Provide a handset in this station such that emergency personnel can establish and maintain communication with one or all (three) elevators and override communications to outside of the building.
- E40.4 Provide one MR-250 Machine Room Station, located in the elevator machine room. Arrange this station to be capable of initiating communication with each (of the three) elevator car(s) without any action by passengers within the elevator.
- E40.5 Be responsible for the complete telephone installation and commissioning including connecting to the existing telephone line in the elevator machine room. Others will provide empty conduit from the Rescue Station in the James Street Main floor entrance lobby to the elevator hoistway. Supply and install complete wiring from each elevator car and the elevator machine room to the Main floor Rescue station and from the Rescue Station to the existing telephone line connection in the elevator machine room.

E41. SERVICE CABINET:

- E41.1 Provide in the new Car Station a lockable Service Cabinet containing all the keyed switches required to operate the car features including LIGHT switch, FAN switch, INDEPENDENT SERVICE switch, STOP switch, BATTERY EMERGENCY LIGHTING TEST switch, HOISTWAY ACCESS switch and volume control for the Voice Annunciator.
- E41.2 Include in the Service Cabinet a 110 Volt GFI (ground fault protected) duplex receptacle.

E42. CAR POSITION INDICATORS:

- E42.1 Provide two new Car Position Indicators per car, finished in mirror finish brass, one mounted at the top of the main and one mounted at the top of the auxiliary car station (a total of two per car), with numerals centred at 5'-10" above the floor. The Position Indicator shall be segmented digital type with 2.2" (minimum) characters arranged to show the location for the elevator as it travels through the hoistway. Include Direction Arrows to show the direction for which the elevator is set to travel.
- E42.2 Skin the existing car door header with new mirror finish brass to hide the old position indicator cut-out.



Existing Car Position Indicator

E43. FLOOR PASSING GONG:

E43.1 Provide an audible gong to sound each time the elevator passes or arrives at a floor. (Initially, leave this gong turned off.)

E44. INTERMEDIATE FLOOR HALL CALL STATIONS:

E44.1 Supply and install new hall call station at the intermediate floor landings (a total of 5 sets) with UP and DOWN push buttons. Provide buttons with a minimum 1 full inch diameter pressel (this is larger than required by Appendix E).

E44.2 Provide raised tactile and Braille markings located immediately to the left of each button. Provide LED illumination for call registered lights in the hall call buttons. Mount the Hall Call stations with call buttons centred at 42" above the floor. Provide Dupar US91CC Optic design push buttons with illuminated fishtail Braille and tactile markings to the left of each button. Arrange the push buttons so that both the tactile plate and the button surround are normally illuminated in white. When a hall call is registered, change the illumination of both the tactile plate and the button surround to blue.

E44.3 Arrange the hall push buttons to sound once when an UP call is registered and twice when a DOWN call is registered.

E44.4 Provide for each hall call station a surface-mounted fixture and cover plate in mirror finish brass and long enough to position the buttons at 42 inches above the floor and also to cover the original push button box. Engrave and paint fill on the single extended faceplate the Elevator Corridor Call Station Pictograph shown in Fig. 2.27.9 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.

E44.5 Provide the intermediate floor hall call stations buttons and Braille tags finished in mirror finish brass.



Height aff of existing Intermediate Hall Push Buttons



Main Floor Hall Push Buttons (ashtray will be removed by others)

E45. TERMINAL FLOOR HALL CALL STATIONS:

- E45.1 Supply and install new hall call stations at each terminal landing (a total of 2 sets). Provide buttons with a minimum 1 full inch diameter pressel (this is larger than required by Appendix E)
- E45.2 Provide raised tactile and Braille markings located immediately to the left of each button. Provide LED illumination for call registered lights in the hall call buttons. Mount the Hall Call stations with call buttons centred at 42" above the floor. Provide Dupar US91CC Optic design push buttons with illuminated fishtail Braille and tactile markings to the left of each button. Arrange the push buttons so that both the tactile plate and the button surround are normally illuminated in white. When a hall call is registered, change the illumination of both the tactile plate and the button surround to blue.
- E45.3 Arrange the hall push buttons to sound once when an UP call is registered and twice when a DOWN call is registered.
- E45.4 Provide for each hall call station a surface-mounted fixture and cover plate in mirror finish brass and long enough to position the buttons at 42 inches above the floor and also to cover the original push button box. Engrave and paint fill on the single extended faceplate the Elevator Corridor Call Station Pictograph shown in Fig. 2.27.9 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.

- E45.5 Provide the terminal floor hall call stations, buttons and Braille tags finished in mirror finish brass.



Height aff of existing Terminal Hall Push Buttons

E46. HALL LANTERNS:

- E46.1 Retain and re-use the existing Hall Lantern Lenses at each floor. Provide new LED illumination for the Hall Lanterns. Arrange the Hall Lanterns to show whether the elevator is set to travel UP or DOWN when it has finished serving the current call.
- E46.2 Provide the new LED illumination to show green for UP and red for DOWN.
- E46.3 Arrange the Hall Lantern to sound once for the UP direction and twice for the DOWN direction.
- E46.4 Invert the left hand lens at the Main floor so that it becomes an UP Lantern.

E47. "THIS CAR UP" SIGN:

- E47.1 Remove the existing "THIS CAR UP" sign located in the Main floor entrance transom. The holes left in the transom panel will be cover by the new transom cladding detailed in Clause E52.1.

E48. HALL POSITION INDICATOR:

- E48.1 Provide a Position Indicator with 2.2" (minimum) high segmented digital numbers mounted in the fascia panel over each Main floor entrance. Mount the Hall Position Indicator between the Hall Lanterns. (The transom panels will be clad in new mirror finish brass as described in Clause E52.1.)
- E48.2 Mount the Hall Position Indicator behind the transom panel with the screen pierced into the transom panel. If any portion of the Hall Position Indicator metal faceplate is visible through the transom panel, provide the new Hall Position Indicator faceplate in mirror finish brass to match the new transom panels.



Existing Main Floor Transom Panel

E49. DOOR OPERATOR:

- E49.1 Supply and install a quality gearless door operator powered by a direct current or alternating current motor. The standard of acceptance shall be GAL model MOVFR as a minimum, although other manufacturers' door operators may be substituted provided they fully meet the specification. Provide door operator control such that the door opening and door closing speeds can be adjusted independently and regulated by SCR or VVVF (as appropriate to the type of motor used) solid state circuits without the use of resistors. Provide control capable of adjusting the point of slowdown and the slowdown torque to compensate for a variety of building conditions. The door operator shall provide a door open time of 2.8 seconds and a door close time of 3.2 seconds. Provide control to reverse the doors within 2.5 inches of breaking the photocell beam at any point over the entire travel of the doors.
- E49.2 Arrange the doors to remain open for both car calls and hall calls for a minimum of 8 seconds. Door open time shall be reduced to 1/2 second when a car call is registered or the Door Close button is pressed.

E50. DOOR OPERATOR HARDWARE:

- E50.1 Supply and install a new door operator clutch for the car doors and new landing door interlocks and hall door pick-up roller assemblies at each landing entrance (a total of 14 sets).

E51. CAR DOOR RESTRICTOR:

- E51.1 Provide hardware to prevent the car doors from opening when the car is outside of the landing zone, as defined by the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.

E52. HOISTWAY ENTRANCES – MAIN AND SECOND FLOORS:

- E52.1 Clad the existing hoistway door jambs, door panels and transoms (including light soffit) at the Main and 2nd floors (a total of 4 entrances) in mirror finish brass. Chemically etch the door panels with the City of Winnipeg Coat of Arms, approximately 24" wide by 24" high. Artwork in electronic format will be supplied by the City. Centre the Coat of Arms on the centre of the door opening. Obtain approval of the etching shop drawing before proceeding with the etching process



City of Winnipeg Coat of Arms (Engrave the darkened portions so that the lettering stands proud.)

E52.2 The cladding of each piece is to be in a single continuous sheet. Note that the door jambs at the Main floor are approximately 12'-3" high and 12'-0" high at the 2nd floor.

E53. HOISTWAY ENTRANCES – TYPICAL FLOORS:

E53.1 Others will re-finish the landing doors, frames transom panels and light soffits at typical floors in sprayed-on paint, under a separate contract. Co-ordinate with the painting contractor by applying foam strips at the edges of the door panels to prevent over-spray into the hoistway and by removing and replacing the hall lantern lenses as needed.

E54. HOISTWAY DOOR UNLOCKING DEVICES:

E54.1 Provide new hoistway door unlocking devices for the existing hoistway doors at each landing.

E55. LANDING ENTRANCE FIRE RATED HARDWARE:

E55.1 Supply and install new landing door retainers at the top of each door panel to keep the door panels connected to the door tracks in the event of a fire (a total of 14 entrances).

E55.2 Supply and install new fire gibs to reinforce the bottom of the existing landing doors to withstand horizontal forces applied to the doors, in accordance with the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators (a total of 14 entrances).

E56. PHOTO CELLS:

E56.1 Remove and dispose of the existing multi-beam infra red photocells. Supply and install new multi-beam infra-red photocells to protect the elevator doorway and to provide a 3-D triangular zone of protection on the landing in front of the car doors. Provide at least 40 beams projecting horizontally across the car entrance providing detection over the whole area from 6 inches to 6 feet above the car sill. Provide, in addition, a zone of detection projecting out onto the corridor side of

the elevator doors, capable of detecting an obstruction before it enters the doorway. Photocell device shall contain an automatic failure protection feature. If the door is held open in excess of 25 seconds by actuation of the photocell device, the photocell shall be disconnected from the door open circuit. The doors shall be allowed to close, but at reduced speed and torque, as detailed in the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators. In the event of failure of the photocell device or if the device times out, a buzzer shall sound while the doors are closing, to warn passengers that the detection feature is inoperable. In addition, if the triangular portion of the door protection device senses an obstruction but the doorway portion does not and this condition persists for a period of twenty seconds, disable the triangular portion and allow the doors to close with reference to the doorway portion only.

E57. CAB FINISHES:

- E57.1 Paint the existing cab top including returns on four walls with quality enamel paint in the City's choice of colour.
- E57.2 Provide new T8 ballasts and fluorescent lighting. Provide sufficient lighting fixtures to obtain a minimum illumination of 20 foot candles measured at the car station and at the sill.
- E57.3 Provide new suspended ceilings consisting of bronze-coloured aluminum "Lumacell" open cell panels in a matching aluminum surround frame. Suspended ceiling to be continuous without intermediate T-bar sections.



"Lumacell" (by Eagle Hill Tool & Die(or others))



Existing cab wall and ceiling detail

- E57.4 The existing wood wall treatment will be retained and re-furbished by others under a separate contract.
- E57.5 Skin the existing cab base in black plastic laminate.
- E57.6 Insert blocking into the space currently occupied by the Car Position Indicator above the car doors and skin the existing header and car door jambs in new mirror finish brass.
- E57.7 Skin the existing car doors in new mirror finish brass match the door frame.
- E57.8 Remove and polish the existing flat bar continuous handrails on the rear and two side walls for a like-new appearance. Re-install the handrails at handicap height. Ensure that the gap between the wall and the back of the handrail is between 1 9/16" and 1 3/4". Provide new brass carriage bolts to cover the old hand rail mounting holes.
- E57.9 Provide new black plastic laminate cab base. Remove the existing duplex outlet in the cab base. Replace it with a new GFI duplex receptacle located in the Service Cabinet.



Existing wall finish, radiused corner, duplex outlet.

- E57.10 Provide a neat workman-like job so that the brass portions of the cab look like new factory-manufactured material.
- E58. BATTERY EMERGENCY CAB LIGHTING:**
- E58.1 Supply and install battery emergency cab lighting. Arrange the controlling circuitry so that when power is removed from the normal lighting circuit, the battery emergency cab lighting will automatically activate and provide sufficient lighting at the Car Operating Panel. Provide batteries of adequate capacity to maintain adequate lighting in the car for a minimum of four hours. Provide an automatic battery charger to maintain the batteries at full charge at all times between uses.
- E58.2 Provide, as part of the emergency cab lighting equipment, an alarm bell connected to the alarm button in the car station. Arrange the alarm bell to sound with or without the normal cab lighting power supply.
- E58.3 Provide a keyed switch in the car service cabinet to facilitate testing of the battery emergency lighting feature.
- E59. CAR FAN:**
- E59.1 Provide in each car a new car fan. Mount the fan on rubber mounts to reduce the transmission of vibration to the cab. Wire the cab fan into the cab lighting circuit.

E60. CAR APRON PLATE:

E60.1 Remove and dispose of the existing car apron plates and replace them with new aprons 48" long.

E61. CAR-TOP GUARD RAIL:

E61.1 Provide a metal railing mounted of the top of the car on the rear and sides. The railing shall consist of a top rail, an intermediate rail and a toe board, all as described in Clause 2.10.2 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.

E62. ELEVATOR IDENTIFICATION:

E62.1 Engrave letters not less than 75 mm. high into the transom panel at the 1st floor to designate "E1" and E2. Provide markings 50 mm. high on the hoist machine, controller, governor, main line disconnect switch, car crosshead and engraved into the car station of each car (25 mm. high).

E63. FLOOR NUMBERS:

E63.1 Provide floor numbers, not less than 100 mm. high, on the hoistway side of the landing doors to indicate floor position.

E64. FIREFIGHTERS' EMERGENCY OPERATION:

E64.1 Others to provide four pairs of signal wires from the fire control panel to one elevator controller, each forming a normally-closed circuit; one pair of wires will indicate a fire at any floor except the Main floor for Main Floor Recall; the second pair of wires will indicate a fire at the Main floor for use in Alternate Floor Recall, and the third pair to indicate a fire in the elevator hoistway and the fourth pair to indicate a fire in the elevator machine room.

E64.2 Provide Phase I Emergency Recall Operation. Provide a three-position keyed switch mounted in the existing Main floor brass lobby panel and labelled "FIRE RECALL" and marked " RESET - OFF - ON" and. Remove and engrave this plate with the required engraving to suit the new Phase I switch, or alternately replace this plate with a matching plate, engraved as required. With the switch in the "OFF" position, in the event of a fire, cause all elevators to travel non-stop to the designated floor and park with doors open; with the switch in the "ON" position, cause all elevators to travel immediately non-stop to the Main floor; with the switch in the "RESET" position, over-ride the fire alarm system.

E64.3 If the fire sensor at the designated level is activated, cause the elevators to travel to the alternate floor.

E64.4 If the fire sensors in the elevator machine room or in the hoistway are activated, cause the fire signal in all cars to illuminate intermittently.

E64.5 Provide, mounted in the Rescue Station adjacent to the fire alarm panel in the James Street Main floor entrance lobby, an additional two-position keyed switch labelled "FIRE RECALL" and marked "OFF - ON".

E64.6 Provide Phase II Emergency In-Car Operation. Provide in each Main Car Station a lockable cabinet containing the required controls: a keyed switch marked "FIRE OPERATION" having three positions marked "OFF - HOLD - ON", with the key removable in the "OFF" and "HOLD" positions only; with the switch in the "ON" position, arrange for uninterrupted control of the elevator by the fireman; doors to close by constant pressure on the "Door Close" button; once doors are closed, a car call may be registered; arrange the car to travel non-stop to the selected floor, and park with its doors closed; open doors by constant pressure on the "Door Open" button. When the car is at a landing and the keyed switch is turned to the "HOLD" position, the

doors shall remain open and car calls cannot be registered. When the keyed switch in the car is turned to the "OFF" position, the car shall automatically return to the recall floor.

- E64.7 Provide a "CALL CANCEL" button. Pressing the "CALL CANCEL" button shall cancel any registered car calls and cause the elevator to stop at the next available floor.
- E64.8 The elevator shall be returned to normal operation when the in-car switch is in the "OFF" position and the main floor lobby switch and the switch at the James Street entrance lobby are both in the "OFF" position.
- E64.9 Provide cab materials with required fire ratings as detailed in Clause 2.14.2.1 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.



Main floor lobby Phase I switch and Emergency Power switches

E65. EMERGENCY POWER CONTROL:

- E65.1 A pair of signal wires from an auxiliary contact on the standby generator throw-over switch to one elevator controller forming a normally-closed circuit in existing in the elevator machine room.
- E65.2 Provide fully automatic control sequence to home one elevator at a time of the three elevators to the Main floor on standby-fed power source; normal cab lighting to operate automatically on standby-fed 110 volt power source. Arrange that Elevator #3 will then continue to run. Any (of the three) cars can be manually selected to continue to run using a new manual selector switch, mounted in the existing Lobby cover plate. Remove and engrave this plate with the required engraving to suit the new Emergency Power Selector, or alternately replace this plate with a matching plate, engraved as required. Provide the required labelled signals in the car and hall stations to indicate when the elevators are running on emergency power.

E66. CODE DATA PLATE:

- E66.1 Provide a data plate permanently mounted on the machine room wall or controller cabinet. The Code Data Plate shall indicate the Code and edition in effect at the time of the original installation as well as the edition of the Code under which this modification is being registered and inspected.

E67. CONFIRMATION OF MANUFACTURER'S REQUIREMENTS:

- E67.1 Provide a data plate permanently mounted on the machine room wall or controller cabinet to indicate the manufacturer's requirements for the temperature and humidity ranges for the elevator machine room.

E68. PAINT ELEVATOR PIT FLOOR:

E68.1 After installation of the complete material, paint the pit floor with suitable grey epoxy concrete floor paint. Also paint the pit channels and buffers. This painting shall be done after hours when the building is not occupied.

E69. MANUALS:

E69.1 Provide a maintenance manual, in duplicate, to include information and instructions for all the new components supplied under this specification. The maintenance manual shall include operation, maintenance and adjusting information as well as a parts catalogue for all components supplied. The operation portion shall describe how each function of the modernized elevator works. The maintenance manual shall detail all maintenance routines and their frequency and all materials recommended to perform complete maintenance. The adjuster portion shall describe the different variables available in the controller and door operator, how to set each variable and recommended settings for this application.

E69.2 Provide this manual to the Contract Administrator within one week of the material being delivered on Site in order to give the Contract Administrator and City sufficient time to review the Manual before the instructional session is presented.

E69.3 Provide to the Contract Administrator electrical schematic wiring diagrams showing the complete installation.

E70. INSTRUCTIONS TO THE CITY:

E70.1 Include in your Bid price two hours to demonstrate the completed installation to the City's staff. Arrange a time suitable to the City and conduct the instructional session with reference to the Operations Manual detailed in the Manuals Section above.

E70.2 Demonstrate and provide written instructions for releasing a trapped passenger from the elevator car.

SERVICE ELEVATOR - DESCRIPTION OF EQUIPMENT AND WORK

Service Elevator (Elevator #3)

E71. EXISTING CONDITIONS

E71.1 The hoistway, pit and machine room are all existing and shall be reused in their present condition.

E71.2 The three-phase power supply to each car, single-phase power supply to each car, emergency power supply including signal from the transfer switch are all existing and shall be reused in their present condition.

E72. PROTECTION OF HOISTWAYS:

E72.1 Provide temporary enclosures or other suitable protection for open elevator hoistway during the time the elevator is being installed. Also provide separation between hoistways as required to protect workers during installation.

E73. CAPACITY:

E73.1 Maintain the existing capacity of 4000 pounds exclusive of car and cables.

E74. SPEED:

E74.1 Maintain the existing speed of 250 fpm under full load.

E75. STOPS AND OPENINGS:

E75.1 Maintain the existing eight stops and eight front openings at Basement to 7th floor plus additional rear openings at Basement, 2nd floor and 7th floors.

E76. SELECTIVE-COLLECTIVE OPERATION:

E76.1 Remove and dispose of the existing controller and replace it with a new controller. The controller shall be microprocessor-based and incorporate both speed control and dispatching logic.

E76.2 The speed control shall be of the Variable Voltage Variable Frequency type employing solid state devices to vary the voltage and the frequency of power applied to the drive motor to produce smooth acceleration and slow-down and ensure consistent level stops in both the UP and the Down direction. Use a closed-loop feed-back system to constantly monitor the speed of the car and instantaneously adjust it so that it constantly matches a pre-programmed speed curve pattern. Employ a feedback monitoring system which will ensure consistent speed pattern regardless of variations in the power supply to the car, weight in the car, direction of travel and all other variables affecting the speed of the car.

E76.3 Provide automatic levelling and re-levelling to maintain the car within ¼" of floor level regardless of the load in the car.

E76.4 Provide Selective Collective operation with solid state "memory" control. Dispatch the car to service car and hall calls in the most efficient manner. Include the following features as a minimum standard: high call reversal and anti- nuisance feature (triggered by either the weight-sensitive floor where the number of calls registered is disproportional to the weight in the car or by the photo-cell door protection device where two consecutive stops are made with no passengers entering or leaving the car).

E76.5 Provide single push buttons at each terminal floor and UP-DOWN push buttons at each intermediate floor, all set as a hidden riser in the landing door jamb at each floor.

E76.6 Arrange that the door open time for a stop in response to a car call shall be independently adjustable from the door open time for a stop in response to a hall call. Initially, set the door open time at 8.0 seconds for both car call and hall calls (special Universal Design requirement)

E76.7 Provide proof that you have not provided a control programmed to shut the elevator down after a pre-determined amount of time or number of trips whereby a special proprietary code or device must be applied to the control. If such a feature is provided with the control supplied, provide, in addition, the proprietary device required to restart the elevator plus written instructions on how to use the restart device.

E77. INDEPENDENT SERVICE: (SIMILAR TO ELEVATORS #1 AND 2)

E77.1 Provide a two-position keyed switch in the car operating station marked "INDEPENDENT SERVICE". With the switch in the "ON" position, the elevator will not respond to hall calls but will stop for car calls only. The hall calls shall cancel as soon as they are registered while the car is on Independent Service. When the elevator stops at a floor, it shall park with its doors open and the doors shall close only when constant pressure is applied to the DOOR CLOSE button.

E78. CARD READER SYSTEM: (SAME AS ELEVATORS #1 AND 2)

E78.1 The card reader system on the elevators is to be integrated into the PegaSys security system presently being installed in the building. Others will provide one card reader for each elevator car. Mount the card reader adjacent to the Main Car Operating Station. Arrange that, when floor security is in effect, as determined by the card reader controller provided as part of the PegaSys security card reader system, access to all floors except the Main floor will be controlled by the card readers. Provide a suitable cable consisting of six shielded 18AWG conductors running from the card reader to the elevator machine room. Wire the car calls through the card reader relays such that when no security is in effect, the relays for all floors will be normally closed or a signal line voltage of 0 Volts DC will be provided by the card reader controller and all car calls will register as normal. When floor access security is in effect, all relay contacts will open, thus preventing car calls from being registered or a signal voltage of 24 Volts DC will be provided. When a valid card is swiped, the card access controller will close the contacts for the floors or drop the signal line voltage for floors for which that card has authorized access. The authorized contacts will remain closed and the signal line voltage reduced to 0 for approximately five seconds and during this time car calls for the authorized floors may be registered. After five seconds when the contacts again open or the signal line voltage returns to 24 Volts DC, allow the call registered light to remain illuminated until the call is answered (but blocking further car calls).

E79. ADJUSTER'S MANUAL: (SAME AS ELEVATORS #1 AND 2)

E79.1 Provide a complete adjuster's manual with the installation. The adjuster's manual shall detail which operational parameters are software selectable and which are hardware controlled. Provide a description of how to adjust these parameters and their initial values. Provide as part of the installation a field diagnostic and adjustment tool suitable to troubleshoot the elevator and re-tune the installation should the controller lose all its memory or in order to change parameters which are held in software.

E80. BACK-UP SUPPLY OF SOLID STATE BOARDS: (SIMILAR TO ELEVATORS #1 AND 2)

E80.1 Include one duplicate of each solid state card used in the installation complete with all chips in place on the card, such that any card may be substituted into the controller and the elevator continue to operate normally. Deliver these cards to the Project Co-ordinator on Site and obtain written acceptance of the cards.

E80.2 Provide any additional cards whose hardware or software are different from Elevators #1 and 2. Include all chips in place on the card, such that any card may be substituted into the controller and the elevator continue to operate normally.

E81. DRIVE MOTOR:

E81.1 Remove and dispose of the existing D C hoist machine drive motor and replace it with an AC motor of the same horse power as the existing motor (34 H P) and suitable for use with the new VVVF application.

E82. DRIVE SHEAVE AND CABLE GUARDS: (SAME AS ELEVATORS #1 AND 2)

E82.1 Provide substantial guards to protect maintenance personnel from exposure to the hoist cables and moving parts of the hoist machine.

E83. ROPE BRAKE: (SAME AS ELEVATORS #1 AND 2)

E83.1 Provide a rope brake complete with enabling circuits to prevent the elevator car from overspeeding in the UP as well as the DOWN direction. Also provide circuits to monitor the position of the car within the hoistway so that, if the car travels outside the door zone with its doors open, the rope brake will be applied.

E84. GOVERNOR: (SAME AS ELEVATORS #1 AND 2)

- E84.1 Remove the existing governor and replace it with a new governor, arranged to monitor the speed of the car in both the UP and the DOWN direction. Provide, in addition, the ability to sense when the car is beginning to overspeed.
- E84.2 Provide enabling circuits such that, when the car has exceeded its normal operating speed but before it reaches its governor tripping speed, the control shall cause the elevator to travel at reduced speed, stop at the next available floor and shut down with its doors open. Restore the car to automatic operation by cycling the main line switch (after correcting the reason for the overspeed condition).
- E84.3 Provide suitable guards to protect maintenance personnel from exposure to the governor cable and moving parts of the governor.

E85. CAR SAFETY: (SAME AS ELEVATORS #1 AND 2)

- E85.1 Dismantle, clean, adjust and lubricate the car safeties and safety linkages to ensure consistent application of the car safeties in the event the car encounters an overspeed condition.

E86. LIFT ROPES: (SAME AS ELEVATORS #1 AND 2)

- E86.1 Remove the existing lift cables from the car and replace them with new lift cables, maintaining the same number and diameter of cables. Ensure that the total factor of safety of the new cable system is the same or greater than the original cables. Do not use lift cables with a hardness which may damage the existing machine drum and deflector sheaves.
- E86.2 If the new ropes supplied are different in material or grade (or number or diameter) from the existing ropes, provide certification from a licensed professional engineer that the material of the existing sheaves is satisfactory for the revised application.
- E86.3 Provide tags to confirm the date when the ropes were replaced.

E87. WEDGE CLAMPS: (SAME AS CARS #1 AND 2)

- E87.1 The existing wedge clamp terminations may be re-used (at the elevator contractor's discretion) for the new lift cables.
- E87.2 Properly equalize the tension in each cable to ensure long-wearing characteristics in the new cables.

E88. GOVERNOR ROPE: (SAME AS ELEVATORS #1 AND 2)

- E88.1 Remove and dispose of the existing governor cable and replace it with a new governor cable. Ensure that the diameter of the cable is compatible with the new governor specified above.
- E88.2 Provide tags to confirm the date when the rope was replaced.

E89. ELECTRICAL WIRING: (SAME AS ELEVATORS #1 AND 2)

- E89.1 Supply and install complete new wiring for the entire installation, including machine room wiring, hoistway wiring, travelling cable and car.
- E89.2 Provide a waterproof covering for the travelling cable. Run the travelling cable in a continuous run from the car to the controller in the elevator machine room without a half-way junction box. Provide shielded wire in the travelling cable for the telephone and terminate this wiring in the new Rescue Station specified in Clause E40.1 and located in the James Street Main floor entrance lobby.

- E89.3 Provide at least 20% spare wires beyond that required for all components presently in the system.
- E89.4 Terminate the spare wires at each end of their run on properly labelled contact strips.
- E90. HOISTWAY SWITCHES: (SAME AS ELEVATORS #1 AND 2)**
- E90.1 Provide new slow-down, direction, terminal and limit switches in the hoistway. Replace the existing STOP switch in the pit.
- E91. HOISTWAY ACCESS: (SIMILAR TO ELEVATORS #1 AND 2)**
- E91.1 Provide hoistway access keyed switches at the Basement (bottom) and 7th (top) landings complete with enabling circuits on the controller to permit access to the pit and top of the car.
- E92. STOP SWITCH IN OVERHEAD SPACE: (SAME AS ELEVATORS #1 AND 2)**
- E92.1 Supply and install a new Stop Switch in the hoistway within reach of the top floor landing entrance.
- E93. TOP-OF-CAR INSPECTION: (SAME AS ELEVATORS CAR #1 AND 2)**
- E93.1 Replace the existing top-of-car inspection station with a new top-of-car inspection station
- E93.2 Ensure that the complete operation of the top-of-car inspection station complies with 2.26.1.4 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.
- E94. NEW CAR STATION:**
- E94.1 Remove and dispose of the existing car station from the car and provide a new car stations. Include a lockable Firefighter's Emergency Service panel at the top of the car operating station and also incorporate the hands-free telephone specified in Clause E96.1. Provide a lockable service cabinet at the bottom of the car station.
- E94.2 Arrange the car operating buttons at the bottom of the car stations and arrange the floor buttons in accordance with the requirements of Appendix E of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators except that the highest button shall be not more than 47 inches above the floor. Provide buttons with a minimum 1 full inch diameter pressel (this is larger than the Appendix E requirement). Provide Braille and tactile markings to the left of each button. The buttons in the new car stations shall as manufactured by MAD Fixtures BS Moon with fishtail markings or Dupar 91cc round concave push button with fishtail marking. Elevator Suppliers may substitute their own standard design provided that they meet all requirements for size, fishtail raised markings and audible signalling.
- E94.3 Mount the lowest car button at 35" above the floor and provide an extended faceplate to approximately 6'-6" to cover the old cut-out (approximate height of 64" above the car floor) and to accommodate the new Car Position Indicator.



Height aff of existing Car Station Coverplate



Bottom of existing Car Station Coverplate



Width of existing Car Station Coverplate

E94.4 Provide LED illumination for call-registered lights in the car call and ALARM buttons and audible call registered buzzer.

- E94.5 Incorporate a new certificate holder into the new car station.
- E94.6 Engrave the elevator number E3 into the car station with lettering 25 mm. high
- E94.7 Provide the car station in mirror finish brass.
- E94.8 Provide the Firefighter's Cabinet, Service Cabinet and telephone completely flush-mounted and vandal-proof.
- E95. VOICE ANNUNCIATOR: (SAME AS ELEVATORS #1 AND 2)**
- E95.1 Provide a voice annunciator for each elevator. Arrange the voice annunciator to announce the floor name each time the elevator stops at a floor, the direction of travel of the next trip and special advisory messages such as instructions to clear the doorway, announcement of a fire alarm, etc. Provide a quality speaker such that the voice annunciator can be clearly understood anywhere in the cab. Provide a volume control, mounted in the Service Cabinet.
- E96. TELEPHONE: (SIMILAR TO ELEVATORS #1 AND 2)**
- E96.1 Supply and install a hands-free AutoDial telephone Style OEM-150 manufactured by Webb Electronics, mounted integral with the car station for a completely flush installation. Do not provide a telephone cabinet or mount the phone coverplate proud of the car station coverplate. Provide a push button in the car station with the telephone symbol. Provide perforations in the car station coverplate for the telephone microphone and speaker so that the telephone is completely vandal-resistant. Arrange that when the telephone push button is pressed, the phone automatically initiates a call through the Rescue Station. Provide a quality telephone such that clear communication is provided for the passengers from any point in the car. Arrange the phone to automatically hang up when the other party hangs up to allow further calls to be placed. Arrange that the phone can receive calls from outside the car and can confirm to the telephone operator the location of the elevator.
- E96.2 Wire the car telephone into the Rescue Station specified in Clause E40.1.
- E96.3 Be responsible for the complete telephone installation and commissioning including connecting to the existing telephone line in the passenger elevator machine room. Others will provide empty conduit from the Rescue Station in the James Street Main floor Entrance Lobby to the elevator hoistway. Supply and install complete wiring from the elevator car to the Main floor Rescue station and from the Rescue Station to the existing telephone line connection in the elevator machine room.
- E97. SERVICE CABINET: (SIMILAR TO ELEVATORS #1 AND 2)**
- E97.1 Provide in the new Car Station a lockable Service Cabinet containing all the keyed switches required to operate the car features including LIGHT switch, FAN switch, INDEPENDENT SERVICE switch, STOP switch, BATTERY EMERGENCY LIGHTING TEST switch, HOISTWAY ACCESS switch and volume control for the Voice Annunciator.
- E97.2 Include in the Service Cabinet a 110 Volt GFI (ground fault protected) duplex receptacle.
- E98. CAR POSITION INDICATOR: (SIMILAR TO ELEVATORS #1 AND 2)**
- E98.1 Provide a new Car Position Indicator finished in mirror finish brass, mounted at the top of the car station, with numerals centred at 5'-10" above the floor. The Position Indicator shall be segmented digital type with 2.2" (minimum) characters arranged to show the location for the elevator as it travels through the hoistway. Include Direction Arrows to show the direction for which the elevator is set to travel.
- E98.2 Skin the existing car door header with new mirror finish brass to hide the old position indicator cut-out.

E99. FLOOR PASSING GONG: (SAME AS ELEVATORS #1 AND 2)

E99.1 Provide an audible gong to sound each time the elevator passes or arrives at a floor. (Initially, leave this gong turned off.)

E100. INTERMEDIATE FLOOR HALL CALL STATIONS:

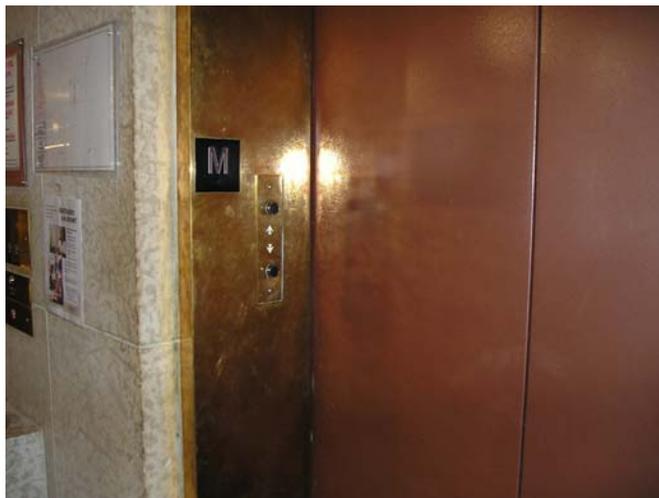
E100.1 Supply and install new hall call station at the intermediate floor landings, mounted in the Landing entrance door frame, (a total of 7 sets) with UP and DOWN push buttons. Provide buttons with a minimum 1 full inch diameter pressel (this is larger than required by Appendix E).

E100.2 Provide raised tactile and Braille markings located immediately to the left of each button. Provide LED illumination for call registered lights in the hall call buttons. Mount the Hall Call stations with call buttons centred at 42" above the floor. The buttons in the new hall stations shall as manufactured by MAD Fixtures BS Moon with fishtail markings or Dupar 91cc round concave push button with fishtail marking. Elevator Suppliers may substitute their own standard design provided that they meet all requirements for size, fishtail raised markings and audible signalling.

E100.3 Arrange the hall push buttons to sound once when an UP call is registered and twice when a DOWN call is registered.

E100.4 For each hall call station, cut the existing frame to accept the new back box for the new hall push buttons. Securely mount the new back box to the existing masonry or to the existing frame with invisible fastenings. Provide an extended coverplate in mirror finish brass long enough to cover the old cut-out in the door frame. Engrave and paint fill on the extended faceplates the Elevator Corridor Call Station Pictograph shown in Fig. 2.27.9 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators. Also engrave and paint fill ``SERVICE ELEVATOR ONLY`.

E100.5 Provide the intermediate floor hall call stations finished in mirror finish brass.



Typical hidden riser of Intermediate Hall Push Buttons



Height of existing Service Elevator #3 Hall Push Buttons

E101. TERMINAL FLOOR HALL CALL STATIONS:

- E101.1 Supply and install new hall call stations at each terminal landing, mounted in the Landing entrance door frame, (a total of 4 sets). Provide buttons with a minimum 1 full inch diameter pressel (this is larger than required by Appendix E).
- E101.2 Provide raised tactile and Braille markings located immediately to the left of each button. Provide LED illumination for call registered lights in the hall call buttons. Mount the Hall Call stations with call buttons centred at 42" above the floor. The buttons in the new hall stations shall as manufactured by MAD Fixtures BS Moon with fishtail markings or Dupar 91cc round concave push button with fishtail marking. Elevator Suppliers may substitute their own standard design provided that they meet all requirements for size, fishtail raised markings and audible signalling.
- E101.3 Arrange the hall push buttons to sound once when an UP call is registered and twice when a DOWN call is registered.
- E101.4 For each hall call station, cut the existing frame to accept the new back box for the new hall push buttons. Securely mount the new back box to the existing masonry or to the existing frame with invisible fastenings. Provide an extended coverplate in mirror finish brass long enough to cover the old cut-out in the door frame. Engrave and paint fill on the extended faceplates the Elevator Corridor Call Station Pictograph shown in Fig. 2.27.9 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators. Also engrave and paint fill ``SERVICE ELEVATOR ONLY``.
- E101.5 Provide the terminal floor hall call stations finished in mirror finish brass.

E102. HALL LANTERNS: (SAME AS ELEVATORS #1 AND 2)

- E102.1 Retain and re-use the existing Hall Lantern lenses at each floor. Provide new LED illumination for the Hall Lanterns. Arrange the Hall Lanterns to show whether the elevator is set to travel UP or DOWN when it has finished serving the current call.
- E102.2 Provide the new LED illumination to show green for UP and red for DOWN.
- E102.3 Arrange the Hall Lantern to sound once for the UP direction and twice for the DOWN direction.
- E102.4 Invert the left hand lens at the Main floor so that it becomes an UP Lantern.

E103. "THIS CAR UP" SIGN: (SAME AS ELEVATORS #1 AND 2)

E103.1 Remove the existing "THIS CAR UP" sign located in the Main floor entrance transom. The holes left in the transom panel will be covered by the new transom skins detailed in Clause E108.1.

E104. HALL POSITION INDICATOR: (SAME AS ELEVATORS #1 AND 2)

E104.1 Provide a Position Indicator with 2.2" (minimum) high segmented digital numbers mounted in the fascia panel over each Main floor entrance. Mount the Hall Position Indicator between the Hall Lanterns. (The transom panels will be clad in new mirror finish brass as described in Clause E108.1.)

E104.2 Mount the Hall Position Indicator behind the transom panel with the screen pierced into the transom panel. If any portion of the Hall Position Indicator metal faceplate is visible through the transom panel, provide the new Hall Position Indicator faceplate in mirror finish brass to match the new transom panels.



Existing Main Floor Transom Panels

E105. DOOR OPERATOR: (SIMILAR TO ELEVATORS #1 AND 2)

E105.1 Supply and install two quality gearless doors operator powered by direct current or alternating current motors. The standard of acceptance shall be GAL model MOVFR as a minimum, although other manufacturers' door operators may be substituted provided they fully meet the specification. Provide door operator control such that the door opening and door closing speeds can be adjusted independently and regulated by SCR or VVVF (as appropriate to the type of motor used) solid state circuits without the use of resistors. Provide control capable of adjusting the point of slowdown and the slowdown torque to compensate for a variety of building conditions. The door operator shall provide a door open time of 2.8 seconds and a door close time of 3.2 seconds. Provide control to reverse the doors within 2.5 inches of breaking the photocell beam at any point over the entire travel of the doors.

E105.2 Arrange the doors to remain open for both car calls and hall calls for a minimum of 8 seconds. Door open time shall be reduced to 1/2 second when a car call is registered or the Door Close button is pressed.

E106. DOOR OPERATOR HARDWARE: (SAME AS ELEVATORS #1 AND 2)

E106.1 Supply and install a new door operator clutch for the car doors and new landing door interlocks and hall door pick-up roller assemblies at each landing entrance (a total of 11 sets).

E107. CAR DOOR RESTRICTOR: (SAME AS ELEVATORS #1 AND 2)

E107.1 Provide hardware to prevent the car doors from opening when the car is outside of the landing zone, as defined by the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.

E108. HOISTWAY ENTRANCES – MAIN AND SECOND FLOORS: (SAME AS ELEVATORS #1 AND 2)

E108.1 Clad the existing hoistway front door jambs, door panels and transoms (including light soffit) at the Main and 2nd floors (a total of 2 entrance doors) in mirror finish brass. Chemically etch the door panels with the City of Winnipeg Coat of Arms, approximately 24” wide by 24” high. Artwork in electronic format will be supplied by the City. Centre the Coat of Arms on the centre of the door opening. Obtain approval of the etching shop drawing before proceeding with the etching process.

E108.2 The cladding of each piece is to be in a single continuous sheet. Note that the door jambs at the Main floor are approximately 12'-3” high and 12'-0” high at the 2nd floor.



City of Winnipeg Coat of Arms (Engrave the darkened portions so that the lettering stands proud.)

E109. HOISTWAY ENTRANCES – TYPICAL FLOORS: (SAME AS ELEVATORS #1 AND 2)

E109.1 Others will re-finish the landing doors, frames transom panels and light soffits at typical floors in sprayed-on paint, under a separate contract. Co-ordinate with the painting contractor by applying foam strips at the edges of the door panels to prevent over-spray into the hoistway and by removing and replacing the hall lantern lenses as needed.

E110. HOISTWAY DOOR UNLOCKING DEVICES: (SAME AS ELEVATORS #1 AND 2)

E110.1 Provide new hoistway door unlocking devices for the existing hoistway doors at each landing.

E111. LANDING ENTRANCE FIRE RATED HARDWARE: (SAME AS ELEVATORS #1 AND 2)

E111.1 Supply and install new landing door retainers at the top of each door panel to keep the door panels connected to the door tracks in the event of a fire (a total of 11 entrances).

E111.2 Supply and install new fire gibs to reinforce the bottom of the existing landing doors to withstand horizontal forces applied to the doors, in accordance with the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators (a total of 11 entrances).

E112. PHOTO CELLS: (SIMILAR TO ELEVATORS #1 AND 2)

E112.1 Remove and dispose of the existing multi-beam infra red photocells. Supply and install new multi-beam infra-red photocells (a total of two sets) to protect the front and rear elevator doorways and to provide a 3-D triangular zone of protection on the landing in front of the car doors. Provide at least 40 beams projecting horizontally across the car entrance providing detection over the whole area from 6 inches to 6 feet above the car sill. Provide, in addition, a zone of detection projecting out onto the corridor side of the elevator doors, capable of detecting an obstruction before it enters the doorway. Photocell device shall contain an automatic failure protection feature. If the door is held open in excess of 25 seconds by actuation of the photocell device, the photocell shall be disconnected from the door open circuit. The doors shall be allowed to close, but at reduced speed and torque, as detailed in the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators. In the event of failure of the photocell device or if the device times out, a buzzer shall sound while the doors are closing, to warn passengers that the detection feature is inoperable. In addition, if the triangular portion of the door protection device senses an obstruction but the doorway portion does not and this condition persists for a period of twenty seconds, disable the triangular portion and allow the doors to close with reference to the doorway portion only.

E113. CAB FINISHES:

E113.1 Paint the existing cab top including returns on four walls with quality enamel paint in the City's choice of colour.

E113.2 Provide new T8 ballasts and fluorescent lighting. Provide sufficient lighting fixtures to obtain a minimum illumination of 20 foot candles measured at the car station and at the sill.

E113.3 Provide new suspended ceilings consisting of anodized aluminum open cell panels in a matching surround aluminum frame.



Existing cab ceiling Elevator #3



Existing cab wall and corner detail Elevator #3

- E113.4 Provide new plastic laminate of the City's colour choice glued on top of the existing wall finish including radiused corners. Provide matching plastic laminate edges glued over top of existing edges at ends of wall panels. Supply plastic laminate having a maximum flame spread rating of 25 and maximum smoke developed classification of 100 in accordance with CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators Section 3.6.2.1.2 for fire-fighters' elevators.
- E113.5 Provide new base on all four walls in black plastic laminate
- E113.6 Insert blocking into the space currently occupied by the Car Position Indicator above the car doors and skin the existing front and rear headers and car door jambs in new mirror finish brass.
- E113.7 Remove the car doors so that they can be painted at the same time as the landing doors. Re-install the painted car doors.
- E113.8 Remove and polish the existing flat bar handrails on the two side walls for a like-new appearance. Re-install the handrails at handicap height. Ensure that the gap between the wall and the back of the handrail is between 1 9/16" and 1 3/4".
- E113.9 Fill the old hand rail mounting holes before applying the new plastic laminate wall finish.
- E113.10 Provide a neat workman-like job so that the cab looks like a new factory-manufactured cab.
- E114. BATTERY EMERGENCY CAB LIGHTING: (SAME AS ELEVATORS #1 AND 2)**
- E114.1 Supply and install battery emergency cab lighting. Arrange the controlling circuitry so that when power is removed from the normal lighting circuit, the battery emergency cab lighting will automatically activate and provide sufficient lighting at the Car Operating Panel. Provide batteries of adequate capacity to maintain adequate lighting in the car for a minimum of four hours. Provide an automatic battery charger to maintain the batteries at full charge at all times between uses.
- E114.2 Provide, as part of the emergency cab lighting equipment, an alarm bell connected to the alarm button in the car station. Arrange the alarm bell to sound with or without the normal cab lighting power supply.
- E114.3 Provide a keyed switch in the car service cabinet to facilitate testing of the battery emergency lighting feature.

E115. CAR FAN: (SAME AS ELEVATORS #1 AND 2)

E115.1 Provide in each car a new car fan. Mount the fan on rubber mounts to reduce the transmission of vibration to the cab. Wire the cab fan into the cab lighting circuit.

E116. CAR APRON PLATE: (SAME AS ELEVATORS #1 AND 2)

E116.1 Remove and dispose of the existing car apron plates and replace them with new aprons 48" long.

E117. CAR-TOP GUARD RAIL: (SIMILAR TO ELEVATORS #1 AND 2)

E117.1 Provide a metal railing mounted of the top of the car on the rear and sides. The railing shall consist of a top rail, an intermediate rail and a toe board, all as described in Clause 2.10.2 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.

E118. ELEVATOR IDENTIFICATION: (SIMILAR TO ELEVATORS #1 AND 2)

E118.1 Engrave letters not less than 75 mm. high into the transom plate at the 1st floor to designate "E3". Provide markings 50 mm. high on the hoist machine, controller, governor, main line disconnect switch, car crosshead and engraved into the car station of each car (25 mm. high).

E119. FLOOR NUMBERS: (SIMILAR TO ELEVATORS #1 AND 2)

E119.1 Provide floor numbers, not less than 100 mm. high, on the hoistway side of the landing doors to indicate floor position.

E120. FIREFIGHTERS' EMERGENCY OPERATION: (SIMILAR TO ELEVATORS #1 AND 2)

E120.1 Others to provide four pairs of signal wires from the fire control panel to the elevator controller (already described for Elevators #1 and #2 in Clause E64.1), each forming a normally-closed circuit; one pair of wires will indicate a fire at any floor except the Main floor for use in Main Floor Recall; the second pair of wires will indicate a fire at the Main floor for use in Alternate Floor Recall, the third pair to indicate a fire in the elevator hoistway and the fourth pair will indicate a fire in the Penthouse.

E120.2 Provide Phase I Emergency Recall Operation. Provide a three-position keyed switch labelled "FIRE RECALL" and marked " RESET - OFF - ON" (already specified under Clause E64.2). With the switch in the "OFF" position, in the event of a fire, cause all elevators to travel non-stop to the designated floor and park with doors open; with the switch in the "ON" position, similarly cause all elevators to travel non-stop to the Main floor; with the switch in the "RESET" position, over-ride the fire alarm system; provide cab materials with required fire ratings.

E120.3 If the fire sensor at the designated level is activated, cause the elevators to travel to the alternate floor.

E120.4 If the fire sensors in the elevator machine room or hoistway are activated, cause the visual fire signal in the car served by that machine room to illuminate intermittently.

E120.5 Provide in the Rescue Station in the James Street Main floor entrance lobby an additional two-position keyed switch labelled "FIRE RECALL" and marked "OFF - ON" (already specified under Clause E64.5).

E120.6 Elevator #3 will be the designated firefighter's elevator. Provide Phase II Emergency In-Car Operation. Provide in the car station a lockable cabinet containing the required controls: a keyed switch marked "FIRE OPERATION" having three positions marked "OFF - HOLD - ON", with the key removable in the "OFF" and "HOLD" positions only; with the switch in the "ON" position, arrange for uninterrupted control of the elevator by the fireman; doors to close by constant pressure on the "Door Close" button; once doors are closed, a car call may be

registered; arrange the car to travel non-stop to the selected floor, and park with its doors closed; open doors by constant pressure on the "Door Open" button. When the car is at a landing and the keyed switch is turned to the "HOLD" position, the doors shall remain open and car calls cannot be registered. When the keyed switch in the car is turned to the "OFF" position, the car shall automatically return to the recall floor.

- E120.7 Provide a "CALL CANCEL" button. Pressing the "CALL CANCEL" button shall cancel any registered car calls and cause the elevator to stop at the next available floor.
- E120.8 The elevator shall be returned to normal operation when the in-car switch is in the "OFF" position and the main floor lobby switch and the switch at the James Street entrance Vestibule are both in the "OFF" position.
- E120.9 Provide cab materials with required fire ratings as detailed in Clause 2.14.2.1 of the CAN/CSA B44-07 Standard Safety Code for Elevators and Escalators.

E121. EMERGENCY POWER CONTROL:

- E121.1 A pair of signal wires from an auxiliary contact on the standby generator throw-over switch to the elevator controller (already specified in Clause E65.1) forming a normally-closed circuit is existing in the elevator machine room.
- E121.2 Provide fully automatic control sequence to home one elevator at a time to the Main floor on standby-fed power source; normal cab lighting to operate automatically on standby-fed 110 volt power source. Arrange that Elevator #3 car will then continue to run. Any (of the three) cars can be manually selected to continue to run using a manual selector switch (already specified in Clause E65.2). Provide the required labelled signals in the car and hall stations to indicate when the elevators are running on emergency power.

E122. CODE DATA PLATE: (SAME AS ELEVATORS #1 AND 2)

- E122.1 Provide a data plate permanently mounted on the machine room wall. The Code Data Plate shall indicate the Code and edition in effect at the time of the original installation as well as the edition of the Code under which this modification is being registered and inspected.

E123. CONFIRMATION OF MANUFACTURER'S REQUIREMENTS: (SAME AS ELEVATORS #1 AND 2)

- E123.1 Provide a data plate permanently mounted on the machine room wall to indicate the manufacturer's requirements for the temperature and humidity ranges for the elevator machine room.

E124. PAINT ELEVATOR PIT FLOOR: (SAME AS ELEVATORS #1 AND 2)

- E124.1 After installation of the complete material, paint the pit floor with suitable epoxy concrete floor paint.

E125. MANUALS: (SAME AS ELEVATORS #1 AND 2)

- E125.1 Provide a maintenance manual, in duplicate, to include information and instructions for all the new components supplied under this specification. The maintenance manual shall include operation, maintenance and adjusting information as well as a parts catalogue for all components supplied. The operation portion shall describe how each function of the modernized elevator works. The maintenance manual shall detail all maintenance routines and their frequency and all materials recommended to perform complete maintenance. The adjuster portion shall describe the different variables available in the controller and door operator, how to set each variable and recommended settings for this application.

- E125.2 Provide this manual to the Contract Administrator within one week of the material being delivered on Site in order to give the Contract Administrator and the City sufficient time to review the Manual before the instructional session is presented.
- E125.3 Provide to the Contract Administrator electrical schematic wiring diagrams showing the complete installation.

E126. INSTRUCTIONS TO THE CITY: (SIMILAR TO ELEVATORS #1 AND 2)

- E126.1 Include in your Bid price one hour to demonstrate the completed installation to the City's staff. Arrange a time suitable to the City and conduct the instructional session with reference to the Operations Manual detailed in the Manuals Section above.

QUALITY CHARACTERISTICS:

E127. PERFORMANCE CHARACTERISTICS:

- E127.1 Provide a quality of equipment capable of maintaining the following performance levels over the life of the equipment.
- E127.2 Provide, for the passenger elevators, a door operator capable of a door open time and a door close time as specified in 2.1.37 and 2.2.35. Provide control to reverse the doors within 2.5 inches of breaking the photocell beam at any point over the entire travel of the doors.
- E127.3 Adjust the equipment to perform a floor-to-floor run of 8.5 seconds on a typical 8'-8" floor. The floor-to-floor time shall be measured from the instant the doors begin to close until the car is stopped level at the next adjacent floor, with its doors at least ¾ open. This floor-to-floor time shall be achieved in both the UP and the DOWN directions.
- E127.4 Provide equipment capable of producing no more than 60 decibels of noise with the fan on, measured within the car at any point in its travel.
- E127.5 Provide equipment capable of producing no more than 80 decibels of noise, measured 3 feet from the controller or the hoist machine.

E128. PERFORMANCE VERIFICATION

- E128.1 Include in your Bid price four hours to demonstrate the completed installation to the Elevator Contract Administrator. To facilitate testing, the Elevator Contractor shall provide for the use of the City and his Contract Administrator such tools as a tachometer, sound level meter and other equipment as required to verify that the performance characteristics and optional features have been provided in the finished Work as specified.

EXECUTION

E129. REMOVAL AND DISPOSAL OF EQUIPMENT

- E129.1 Remove from Site all materials resulting from dismantling the old equipment and all packaging and other refuse from new equipment. Dispose of this material in accordance with local regulations.

E130. PROTECTION

- E130.1 Aluminum or ferrous metal: placed next to concrete, protect using one heavy coat of bituminous paint on all surfaces in contact with concrete.

E131. INSPECTION

E131.1 Existing conditions: examine to ensure adequate clearances, reinforcing and the like has been provided as required to ensure for proper installation of Work of this Section. Make adjustments to the structure as required to allow the various parts of the Work to come together as required.

E132. INSTALLATION/APPLICATION/PERFORMANCE

E132.1 Work: carry out using trained employees during regular working hours normal for the trade; perform in a workmanlike manner as required to include all Work as shown or reasonably implied by the Contract Documents.

E132.2 Certification: Before starting on Site, provide certification that the elevator contractor and all sub-contractors are COR-certified thorough the Construction Safety Association of Manitoba.

E132.3 Standard: conform to the approved manufacturer's latest printed installation directions and recommendations to all applicable codes and regulations, and to recognized good trade practice.

E132.4 Hoisting: include all temporary hoisting facilities required for the placement and installation of the elevator equipment, including but not limited to crane, temporary beams, or any other means.

E133. HAZARDOUS MATERIALS

E133.1 If asbestos or other hazardous materials are encountered during the Work of the Contract, the Contractor shall stop all Work and notify the Contract Administrator immediately. Removal of hazardous materials shall be dealt with by the City and the Contractor shall await further instruction by the Contract Administrator.