



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 744-2008

**LEASE AGREEMENT FOR THE SUPPLY AND DELIVERY OF FIRE FIGHTING
TURNOUT GEAR (PROTECTIVE ENSEMBLE) AND LEATHER FIRE FIGHTING
BOOTS, COMPLETE WITH MAINTENANCE AND REPAIR CONTRACT**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 LEASE AGREEMENT FOR THE SUPPLY AND DELIVERY OF FIRE FIGHTING TURNOUT GEAR (PROTECTIVE ENSEMBLE) AND LEATHER FIRE FIGHTING BOOTS, COMPLETE WITH MAINTENANCE AND REPAIR CONTRACT

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, October 22, 2008.
- B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.
- B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. ENQUIRIES

- B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.
- B3.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.
- B3.3 If the Bidder is unsure of the meaning or intent of any provision therein, the Bidder should request clarification as to the meaning or intent prior to the Submission Deadline.
- B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B3.5 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B3.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B4. ADDENDA

- B4.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.
- B4.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B4.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>
- B4.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Division internet site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

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

B5. SUBSTITUTES

B5.1 The Work is based on the materials, equipment, methods and products specified in the Bid Opportunity.

B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B5.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least seven (7) Business Days prior to the Submission Deadline.

B5.4 The Bidder shall ensure that any and all requests for approval of a substitute:

- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the material, equipment, method or product as either an approved equal or alternative;
- (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
- (c) identify any anticipated cost or time savings that may be associated with the substitute;
- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract;
- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract.

B5.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.

B5.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.

B5.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.

B5.7 If the Contract Administrator approves a substitute as an "approved equal", any Bidder may use the approved equal in place of the specified item.

B5.8 If the Contract Administrator approves a substitute as an "approved alternative", any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B13.

B5.9 No later claim by the Contractor for an addition to the price(s) because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B6. BID SUBMISSION

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

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

- B6.2 Further to B6.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B5.
- B6.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B6.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B6.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1
- B6.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B6.6 Bidders are advised not to include any information/literature except as requested in accordance with B6.1.
- B6.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, may result in the Bid being determined to be non-responsive.
- B6.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.
- B6.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.
- B6.9 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B7. BID

- B7.1 The Bidder shall complete Form A: Bid, making all required entries.
- B7.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.

- B7.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B7.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
 - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B7.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B7.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B8. PRICES

- B8.1 The Bidder shall state a price in Canadian funds for the Lease, Care and Maintenance of each item of the Work identified on Form B: Prices.
- B8.1.1 Prices on Form B: Prices shall include:
- (a) duty;
 - (b) freight and cartage;
 - (c) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable] and all charges governmental or otherwise paid;
 - (d) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.
- B8.1.2 Prices on Form B: Prices shall not include the Manitoba Association for Resource Recovery Corporation (MARRC) Environmental Handling Charge (EHC) which shall be extra where applicable.
- B8.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B8.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B8.4 Prices from Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B9. QUALIFICATION

- B9.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; and

- (b) be financially capable of carrying out the terms of the Contract; and
 - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B9.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt/debar.stm> .
- B9.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) have successfully carried out work similar in nature, scope and value to the Work; and
 - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
 - (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba).
- B9.4 The Bidder shall submit, within five (5) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.
- B9.4.1 A representative sample of each item identified on Form B: Prices will be required to be provided for destructive testing as part of the evaluation.
- (a) In the event that a representative sample is requested by the Contract Administrator, the unit price stated on Form B: Prices will be compensated to the Bidder for each item required to be submitted for destructive testing.
- B9.5 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B10. OPENING OF BIDS AND RELEASE OF INFORMATION

- B10.1 Bids will not be opened publicly.
- B10.2 Following the Submission Deadline, the names of the Bidders and their bid prices (unevaluated, and pending review and verification of conformance with requirements or evaluated prices) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>
- B10.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>
- B10.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B11. IRREVOCABLE BID

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

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

B12. WITHDRAWAL OF BIDS

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

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

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

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

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

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

B13. EVALUATION OF BIDS

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

- (a) compliance by the Bidder with the requirements of the Bid Opportunity (includes destructive evaluation by City Committee) (pass/fail);
- (b) Qualifications of the Bidder and the Subcontractors, if any, pursuant to B9 (pass/fail);
- (c) Design and construction features exceeding the minimum mandatory requirements 40%;
- (d) Quality of workmanship 20%;
- (e) Total Contract Price 40%.
- (f) economic analysis of any approved alternative pursuant to B5.

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

B13.2.1 Further to B13.1(a), destructive evaluation by City Committee, destructive testing will include taking apart the turnout gear to ensure compliance.

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

B13.4 Further to B13.1(c), the design and construction features exceeding the minimum mandatory requirements will be evaluated based on stitching, seams, composition of material and vapour

barrier to verify compliance of specifications and on comfort, fit, range of motion and all items in NFPA 1500.

B13.5 Further to B13.1(d), the quality of workmanship will be evaluated based on the professional finish of the garments and footwear.

B13.6 Further to B13.1(d), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B13.6.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B13.6.2 Further to B13.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B13.7 This Contract will be awarded as a whole.

B14. AWARD OF CONTRACT

B14.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B14.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

B14.2.1 Without limiting the generality of B14.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
- (d) only one Bid is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

B14.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B13.

B14.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.

B14.4 Notwithstanding C4 and Paragraph 6, the City will issue a purchase order to the successful Bidder in lieu of the execution of a Contract.

B14.5 The Contract Documents, as defined in C1.1(n) (ii), in their entirety shall be deemed to be incorporated in and to form a part of the purchase order notwithstanding that they are not necessarily attached to or accompany said purchase order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. UNFAIR LABOUR PRACTICES

D2.1 Further to C2.02, the Contractor declares that in bidding for the work and in entering into this Contract, he and his subcontractors conduct their respective business in accordance with established international codes as they relate to child and forced labour embodied in United Nations (UN) and International Labour Organization (ILO) conventions as ratified by Canada.

D2.2 The Contractor shall forfeit all claims under the Contract as well as refund to the City any monies paid to him, beyond his actual proven expenses for work done, if this declaration is shown to be false.

D3. SCOPE OF WORK

D3.1 The Work to be done under the Contract shall consist of the supply and delivery of fire fighting turnout gear (protective ensemble) and leather fire fighting boots, complete with a care maintenance agreement to comply with NFPA 1851 for the period of Date of Award to May 31, 2014.

D3.2 The intent of the City of Winnipeg is to Lease-to-Own the complete components of the Fire Fighting uniform, consisting of turnout gear (protective ensemble) and leather fire fighting boots, at the end of this Contract.

D3.3 In addition to D9.2, the Work shall be done on an "as required" basis during the term of the Contract.

D3.3.1 The type and quantity of Work to be performed under this Contract shall be as authorized from time to time by the Contract Administrator and/or Users.

D3.3.2 Notwithstanding C7, the City shall have no obligation under the Contract to purchase any quantity of any item in excess of its actual operational requirements.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Chief Ken Sim

Deputy Chief of Operations
185 King Street
Winnipeg, Manitoba

Telephone No. (204) 986-6380

Facsimile No. (204) 9867920

D5. NOTICES

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

The City of Winnipeg
Chief Financial Officer
Administration Building, 3rd Floor

510 Main Street
Winnipeg MB R3B 1B9
Facsimile No.: (204) 949-1174

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

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

D7. INSURANCE

D7.1 The Contractor shall provide and maintain the following insurance coverage:

- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured; such liability policy to also contain a cross-liability clause, contractual liability and products and completed operations cover, to remain in place at all times during the term of the Contract;
- (b) if required, automobile liability insurance for owned and non-owned automobiles used for or in connection with the Contract in the amount of at least two million dollars (\$2,000,000.00), to remain in place at all times during the term of the Contract; such insurance may be met through the commercial general liability cover where applicable.

D7.2 All policies shall be taken out with insurers licensed to and carrying on business in the Province of Manitoba.

D7.3 Deductibles shall be borne by the Contractor.

D7.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

D7.5 The Contractor shall file with the City an annual Certificate of Insurance in a form satisfactory to the City Solicitor.

D7.6 The City shall have the right to alter the limits and/or coverages as reasonably required from time to time during the continuance of this Contract and for any subsequent renewals thereof, provided that the City shall give the Contractor reasonable notice and shall request reasonable change.

SCHEDULE OF WORK

D8. COMMENCEMENT

D8.1 The Contractor shall not commence any Work until he is in receipt of a notice of award from the City authorizing the commencement of the Work.

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

- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D6;
 - (ii) evidence of the workers compensation coverage specified in C6.16;
 - (iii) evidence of the insurance specified in D7;

- (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.

D9. DELIVERY

D9.1 Goods shall be delivered as follows, f.o.b. destination, freight prepaid to:

City of Winnipeg
Fire Paramedic Service Stores Division
South Side of Building – Bay # 2
2546 McPhillips Street
Winnipeg, Manitoba
R2P 2T2

D9.2 Goods include the initial sizing and supply of Turnout Coats, Turnout Pants and leather firefighting boots as per the following delivery dates of the initial orders:

- (a) March 15, 2009 - 220 sets of made to measure turnout coats, pants and firefighter boots;
- (b) March 30, 2009 - 220 sets of made to measure turnout coats, pants and firefighter boots;
- (c) April 15, 2009 – 220 sets of made to measure turnout coats, pants and firefighter boots;
- (d) April 30, 2009 – 220 sets of made to measure turnout coats, pants and firefighter boots.

D9.3 The Contractor shall confirm each delivery with the Contract Administrator or his/her designate, at least two (2) Business Days before delivery.

D9.4 Goods shall be delivered between 7:30 a.m. and 3:30 p.m. on Business Days.

D9.5 The Contractor shall off-load goods as directed at the delivery location.

D9.6 In addition to D9.2, Goods shall be delivered on an "as required" basis during the term of the Contract, f.o.b. destination, freight prepaid, to the delivery address stated in D9.1.

D9.6.1 Goods shall be delivered within forty-five(45) Business Day(s) of the placing of an order, unless otherwise allowed by the User at the time of ordering.

D9.7 Goods shall be delivered between 7:30 a.m. and 3:30 p.m. on Business Days.

D9.8 The Contractor shall off-load goods as directed at the delivery location.

D10. LIQUIDATED DAMAGES

D10.1 If the Contractor fails to achieve delivery of the goods within the time specified in D9.1 Delivery the Contractor shall pay the City thousand dollars (\$1000.00) per Calendar Day for each and every Calendar Day until the goods have been delivered.

D10.2 The amount specified for liquidated damages in D10.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve delivery by the day fixed herein for same.

D10.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D11. ORDERS

D11.1 The Contractor shall provide a local Winnipeg telephone number or a toll-free telephone number at which orders for delivery may be placed.

D12. RECORDS

- D12.1 The Contractor shall keep detailed records of the goods supplied under the Contract.
- D12.2 The Contractor shall record, as a minimum, for each item listed on Form B: Prices:
- (a) user name(s) and addresses;
 - (b) order date(s);
 - (c) delivery date(s); and
 - (d) description and quantity of goods supplied.
- D12.3 The Contractor shall provide the Contract Administrator with a copy of the records for each quarter year within fifteen (15) Calendar Days of the end of that quarter.

MEASUREMENT AND PAYMENT

D13. INVOICES

- D13.1 Further to C10, the Contractor shall submit an invoice for each order delivered.
- D13.2 Further to C21.4, the Contractor shall submit invoices to the City of Winnipeg, Fire Paramedic Service Department, Stores Branch, 2546 McPhillips Street, Winnipeg MB R2P 2T2.
- D13.3 Invoices must clearly indicate, as a minimum:
- (a) the City's order number;
 - (b) date of delivery;
 - (c) delivery address;
 - (d) type and quantity of goods delivered;
 - (e) the amount payable with GST and MRST shown as separate amounts; and
 - (f) the Contractor's GST registration number.
- D13.4 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D14. PAYMENT

- D14.1 Further to C10, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.
- D14.2 Upon delivery of the complete order of approximately 880 sets of protective gear (as stated in D9.2), the first lease to own monthly payment shall commence on June 1, 2009.
- (a) Monthly payments shall terminate on May 31, 2014.
- D14.3 Further to C10, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D15. WARRANTY

- D15.1 Notwithstanding C11, the warranty period for each item of Work supplied shall begin on the date of successful delivery and expire five (5) years thereafter unless extended pursuant to C11.3, in which case it shall expire when provided for thereunder.

- D15.2 If a defect or deficiency prevents the full and normal use or operation of the Work or any portion thereof, for purposes of calculating the warranty period, time shall be deemed to cease to elapse for the defective or deficient portion, and for any portion of the Work whose use or operation is prevented by such defect or deficiency, as of the date on which the defect or deficiency is observed or the use or operation is prevented and shall begin to run again when the defect or deficiency has been corrected or the Work may be used or operated to the satisfaction of the Contract Administrator.
- D15.3 Notwithstanding C11 and D15.2, if any law of Manitoba or of the jurisdiction in which the Work was manufactured requires, or if the manufacturer provides, a longer warranty period or a warranty which is more extensive in its nature, then the provisions of such law or manufacturer's warranty shall apply

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

E1.1 These Specifications shall apply to the Work.

E1.2 The following are applicable to the Work:

<u>Specification No.</u>	<u>Specification Title</u>
	Table of Contents

E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B5.

E2. GARMENT SIZING AND MEASURING

E2.1 Each protective ensemble shall be custom fit to the user. Bidders are advised that male and female users must be fitted.

E2.2 The Contractor shall be responsible for all measuring. Fit must also take into account dynamic positions of the user as well as the static positions of the user:

- (a) The Contractor shall have a representative able to attend in Winnipeg within two (2) Business Days of notification to take measurements;
- (b) Measuring sessions may be spread out to accommodate shift changes;
- (c) The City will provide a facility in Winnipeg and arrange to have users available for measurements in a continuous manner.

E2.3 The Contractor must insure proper fit after protective coat and protective trousers are washed and dried once, in accordance with manufacturer's instructions. Random confirmation checks will be performed by the City.

E3. LABELS

E3.1 Each garment and boot shall be labelled:

- (a) in accordance with the requirements of NFPA 1971, current edition at time of order placement;
- (b) with the name of the user for whom the garment was fitted;
- (c) all labels shall be permanently sewn so they will stay intact and be legible for the life of the garment;
- (d) each garment to have a bar code label complete with a computerized tracking program supplied at no cost to track information such as:
 - (i) Person to whom garment is issued;
 - (ii) Date of issuance;
 - (iii) Manufacturer;
 - (iv) Model name, number, or design;
 - (v) ID #, lot #, or serial #;
 - (vi) Month and year of manufacture;
 - (vii) Dates and finding of inspections;
 - (viii) Dates cleaned or decontaminated;
 - (ix) Reasons for cleaning/decontamination;
 - (x) Who cleaned or decontaminated;

- (xi) Dates of repair;
- (xii) Who performed the repairs;
- (xiii) Description of repairs;
- (xiv) The person authorizing serviceability;
- (xv) Date of retirement;
- (xvi) Date and method of disposal.

E4. PACKAGING

- E4.1 Protective coats shall be packaged and delivered in a container that allows:
- (a) For a maximum of one fold and a maximum of five protective coats and matching protective trousers per package;
 - (b) For the protection of the boot surfaces.
- E4.2 Each package shall clearly identify on the outside:
- (a) the type of contents (i.e., protective coat(s) and protective trousers);
 - (b) the names of the user(s) for whom the contents were fitted.

E5. QUALITY CONTROL

- E5.1 Each individual garment (protective coat or protective trousers) and fire fighting boot shall be inspected, prior to shipping, by the Contractor to insure the garment or boot is free of flaws, imperfections or blemishes that may adversely affect its appearance or serviceability.
- E5.2 After delivery, each garment and boot will be inspected by the Contract Administrator and the User:
- (a) Upon delivery, each garment will be inspected for flaws, imperfections or blemishes, and obvious sizing errors;
 - (b) After initial inspection but before any use, each garment will be washed and dried once in accordance with the manufacturer's instructions and the user will try garment for fit. If the garment shrinks more than specified (NFPA std.) and is too small for the user the garment shall be replaced at the Contractor's expense.

E6. CARE AND MAINTENANCE

- E6.1 Care and maintenance specified shall be in accordance with NFPA 1851 and is applicable to the Goods stated in E7, E8, E9.
- E6.2 Due to the City of Winnipeg, Winnipeg Fire Paramedic Service being time sensitive for the turn-around time of the care and maintenance of the goods stated in this bid opportunity, the quality and delivery of the Goods are of the utmost importance. Time is of the essence; therefore the following procedure will apply to all Goods requiring care and maintenance as follows:
- (a) The City will document the reason for the return of the item for repair or replacement, using the bar code as identification of the item;
 - (b) The Contractor shall confirm receipt of the item(s) to the Contract Administrator;
 - (c) The Contractor shall send an electronic copy (e-mail or facsimile) containing the item(s) received, to the Contract Administrator;
 - (d) The Contractor shall perform the necessary repairs and deliver the item within 5 Working Days of the receipt of the item, to the Winnipeg Fire Paramedic Service;
 - (e) If a garment requires replacement, the repair facility shall notify the Contract Administrator and the replacement garment shall be delivered with 20 Working Days to the Winnipeg Fire Paramedic Service;

- (f) If a pair of boots requires replacement the repair facility shall notify the Contract Administrator and the replacement boots shall be delivered within 5 working days;
- (g) The City will visually inspect the item to verify the item is of acceptable condition and meeting the approval of the Contract Administrator or his designate; however, the Contract Administrator reserves the right to return the item if upon inspection it is found to be of unacceptable condition at no cost to the Winnipeg Fire Paramedic Service.

If Goods are approved

- (h) If the item is approved by the City, the City will sign the receipt from the carrier and obtain a copy;
- (i) The Contract Administrator, or his delegate, will send an electronic copy of the receipt to the Contractor to acknowledge the Item(s) have been accepted;

If Goods are not approved

- (j) If the item is not approved by the City, the City will return the item(s) to the Contractor, at no cost to the City;
- (k) The Contractor shall either repair or replace the item at no cost to the City within the time frame stated in (e) and/or (f) above.

E7. TURNOUT GEAR SPECIFICATIONS

E7.1 Standards:

- (a) All materials, labels, and component parts, as well as the finished product, must meet or exceed the NFPA 1971 standard, current edition at time of order placement, that applies to protective clothing for structural fire fighting;
- (b) Total garment assembly of outer shell, moisture barrier and thermal liner shall exhibit a minimum TPP of 38;
- (c) Provide third party documentation confirming the TPP rating of the garments proposed to be supplied under the Contract.

E7.2 Design:

- (a) The protective clothing ensemble (protective coat and protective trousers) shall be designed to provide adequate coat/trousers overlap of all three layers (outer shell, moisture barrier and thermal liner) as required by NFPA 1500, current edition at time of order placement, to protect the user when bending, leaning, crawling or stretching. **The use of barriers such as neoprene or rubber in any portion of the garment will not be acceptable. Use of these barriers will render the proposal to be non-responsive;**
- (b) The bunker pants shall be designed to interface with the fire fighting boots to prevent excess drag on the pants or excess clearance to allow heat and materials to easily travel between the **pant and boot**.

E7.3 Materials:

- (a) Outer shell fabric for both protective coat including pockets, hems, straps and tabs as well as protective trousers including pockets, hems, straps and tabs shall be Black Southern Mills PBI Matrix PBI / Kevlar 7.5 oz./sq. yd. Ripstop Weave,
- (b) Moisture barrier shall be Gore Crosstech three (3) layer;
- (c) Thermal liner shall be Southern Mills Caldura Silver SL2 (7.6 oz./sq. yd.) Meta-Aramid face cloth quilted to 2 layers of E-89;
- (d) Thread shall be Nomex thread that will resist heat and shall not ignite, melt or char when exposed to a temperature of 500E F (260E C) in accordance with Method 1534, "Melting Point of Synthetic Fibres," of Federal Test Method Standard 191A, Textile Test Methods;
- (e) Knit material shall be Nomex;

- (f) Hook and loop fastener shall be Velcro Hook #80 and Velcro Loop #1000 and shall be fastened with two(2) parallel rows of thread around the perimeter of both components of the fastener system;
- (g) Hooks and dees or optional zipper shall be as described in NFPA 1971, current edition at time of order placement;
- (h) Snap and fasteners shall be as described in NFPA 1971, current edition at time of order placement, Hardware Requirements;
- (i) Reflective trim shall meet new NFPA current standard with 3M-Scotchlite, Lime two (2) inch and two-tone (silver and lime) three (3) inch as specified.

E7.4 Seams:

- (a) All seams shall be double felled and double stitched. Only lock stitching shall be used in the construction of the garment. There shall be no raw edges and all stress points such as pockets, pocket flaps shall be bar tacked for reinforcement. Stitches shall be 8-10 per inch.

E8. PROTECTIVE/TURNOUT COAT

E8.1 General Design:

- (a) In order to maintain constant protection at the waist area, coat rise should be minimal and shall not exceed four (4) inches when arms are raised from a relaxed position down by the users sides to directly over the user's head;
- (b) Protective coat design shall not cover the protective trousers' pockets but still must overlap the protective trousers and provide a minimum two (2) inch overlap at the waist when the user is bending forward, leaning backward, bending side to side, crawling or stretching;
- (c) Each layer (outer shell, moisture barrier, thermal liner) of the body of the coat shall be constructed with at least three (3) separate body panels. The body panels shall be shaped so as to provide a tailored fit to increase user comfort and to enhance body movement.

E8.2 Modular Construction:

- (a) The protective coat shall be constructed as two separate modules. Also, the ability to purchase from the manufacturing company for five (5) consecutive years any of these three modules as replacement, allowing each to be cleaned separately or replaced separately without replacing the entire protective coat:
 - (i) the outer shell;
 - (ii) the liner consisting of the moisture barrier and thermal liner.

E8.3 The bottom hem of the outer shell shall extend no more than three (3) inches past the bottom hem of the liner.

E8.4 The outer shell and the liner shall be secured to each other by:

- (a) a minimum of twelve snap and dome fasteners around the neck and front seam of the liner and;
- (b) two snap and dome fasteners with a Nomex strap at each sleeve (Dome fasteners shall be one (1) inch from the cuff of the liner. The Nomex strap shall be secured with reinforced stitching to the outer shell. The Nomex strap shall be a maximum of one (1) inch length and 3/4" wide.

E8.5 The liner shall have an inspection port between the thermal liner and moisture barriers:

- (a) This inspection port shall be large enough so the thermal liner and moisture barriers can be pulled through this opening;
- (b) This inspection port shall have a resealable opening of Hook and loop fastener, which shall also be covered by the outer shell;
- (c) This inspection port shall be placed at the bottom edge of the liner.

E8.6 Sleeves:

- (a) Sleeve design and construction shall be shaped one piece that will allow for complete and unrestricted movement through the full range of motion of the arm and shoulder;
- (b) The sleeves shall include an under arm gusset or bellow that is sewn in separately, or alternatively an enlarged area under the arm that is part of the one piece sleeve construction;
- (c) Sleeve construction and design shall be compatible with a gauntlet style glove or mitt;
- (d) The sleeve end of the outer shell shall extend no more than one (1) inch past the sleeve end of the liner;
- (e) Sleeve ends (cuffs) shall be reinforced with an additional 2.0" piece of outer shell material, sewn proportionately on each side of the outer shell.

E8.7 Elbows areas of the liner shall be reinforced with an elbow pad made of an additional layer of thermal liner between the moisture barrier and the thermal liner. Elbow pads shall be of size and placement that elbows are completely covered when the user is in a relaxed position, arms down by their sides or when they are crawling on their elbows.

E8.8 Sleeves shall have at least one wristlet per sleeve consisting of a two layer Nomex knit with minimum value of 20 TPP:

- (a) Wristlets shall be attached to the liner;
- (b) Wristlets shall be provided in such a manner that it will not cause discomfort when user's arms are fully raised or extended;
- (c) Wristlet length and size shall be determined by user's sleeve length and hand size. The minimum length must be five (5) inches.

E8.9 Sleeves shall have a water well constructed of Gore Crosstech 3 layer moisture barrier:

- (a) The water well shall be attached to the liner;
- (b) The water well shall overlap the wristlet. If there are two wristlets then the water well shall only overlap the wristlet with the thumb loop;
- (c) Water well elasticized gathers shall not cause discomfort to the user or restrict circulation in the wrist area;
- (d) Water well shall be constructed to ensure a liquid-tight interface with the glove or mitt;
- (e) Manufacturer to supply waterproof independent 3rd party testing for wristlet design.

E8.10 Drag Rescue Device:

- (a) The Protective Coat shall have a Drag Rescue Device consisting of an integrated system of webbing rope, or other material;
- (b) The drag rescue device must be designed such that a portion of the device is accessible from the coat exterior and can be readily grabbed by others, without interference by the SCBA;
- (c) Must have the capability to drag horizontally over a specified distance without breaking and used for any vertical operations, as per current NFPA standard;
- (d) The materials used in the construction of the drag rescue device are subject to certain breaking strengths requirements as per current NFPA standard;
- (e) The drag rescue device shall be articulating in design and consist of soft loop webbing with rolled edges to prevent damage to the thermal liner when used.

E8.11 Collar:

- (a) The collar shall provide continuous, complete thermal and moisture protection to the neck area:

- (i) The collar shall be a four layer composite construction of outer shell, moisture barrier, thermal liner, and outer shell material;
- (ii) The collar shall be rigid or stiff enough to ensure it can be free standing or can lay flat in the stowed position and not cause the user any discomfort;
- (iii) The collar shall not impede the user's vision or interfere with any other personnel protective equipment;
- (iv) The collar shall be naturally contoured and not less than three (3) inches wide at any point;
- (v) Finished collar assembly shall be attached to the protective coat outer shell so that a water resistant interface will withstand Gore and Associates Inc. low pressure hydrostatic test method;
- (vi) Microphone tab to be on the left side of the front collar, $\frac{3}{4}$ " wide x 3" long.

E8.12 Throat Protector Closure:

- (a) The collar shall incorporate a throat protector closure system;
- (b) The throat protector closure shall be "V" shaped or contoured and a minimum of three (3) in height by eight (8) inches in length;
- (c) When in use, the throat protector closure shall be secured on both sides, i.e., sewn on the left side under the collar and with a minimum of a 2" X 4" hook and loop fastener on the right side. When not in use, the throat protector closure shall be secured on the left side with two pieces of 2" X 4" hook and loop fastener;
- (d) The top portion of the throat protector tab (chin strap) that comes in contact with the chin shall be designed for user comfort and safety; and shall be constructed of a knit Nomex material;
- (e) The hook portion of the hook and loop material shall be sewn to the collar so that only the soft loop portion could come in contact with the user's face and neck;
- (f) The storm flap shall be constructed of a minimum of three layers (outer shell, moisture barrier, outer shell) to reduce bunching when the user is using a SCBA or is leaning forward.

E8.13 Front Closure:

- (a) Positive closure hook and dees shall be used to secure each side of the protective coat together;
- (b) The hook shall be placed on the right side and the dees on the left insuring a continuous thermal liner/moisture barrier when hook and dees are snapped together;
- (c) Positive closures hook and dees shall be fixed to the protective coat with rivets. Rivets to be backed by an Arashield-type material to reduce the occurrence of the rivets pulling through the protective coat. Rivets shall not penetrate the thermal liner;
- (d) There shall be a minimum of four hook and dees used to secure the front of the protective coat together. Placement of the hook and dees shall start 4 1/2" below the neckline and the remainder shall be spaced a maximum of eight (8) inches apart;
- (e) A storm flap shall insure complete thermal and moisture protection while minimizing bulk and weight by incorporating an overlapping design;
- (f) The storm flap shall be a minimum of four (4) inches and a maximum of seven (7) inches in width, and shall cover the positive closures. Length shall be determined by sizing;
- (g) The storm flap shall be constructed of a minimum of three layers (outer shell, moisture barrier, outer shell) to reduce bunching when the user is using a SCBA or is leaning forward;
- (h) A hook and loop system shall extend the entire length of the storm flap. The hook strip shall be sewn to the storm flap and the loop shall be sewn to the left side of the protective coat;
- (i) Or a user requested option NFPA approved Vislon zipper, no brass substitutes.

E8.14 Pockets:

- (a) Protective coat shall have two hand warmer slash pockets on the inside of the outer shell, one bellow type radio pocket on the outside of the outer shell, one notebook pocket on the inside of the liner and one slash pocket on the inside of the storm flap;
- (b) Openings for the two hand warmer slash pockets shall be secured by a flap with a hook and loop fastener closure. Each of the two hand warmer slash pockets shall be approximately 10" x 8" or standard pocket 9" x 7" with intergrated hand warmer pockets;
- (c) The radio pocket shall be 6 ½" in height x 3 1/2 " in width x 2 " in depth, bellow type pocket lined with Crosstech. The radio pocket shall also include a drain, and a storm flap with antenna notch on left side to cover the radio, fixed to the outer shell and secured to the exterior of the pocket with hook and loop closure. The radio pocket shall be placed in a position on the left chest. 1" over from storm flap so that when a radio is inserted in the pocket, the radio does not interfere with the user's SCBA;
- (d) A second separate radio pocket/pouch shall be 6 ½" in height x 3 1/2 " in width x 2 " in depth, bellow type pocket lined with Crosstech shall be constructed for attachment to the SCBA harness. The radio pocket shall also include a drain, and a storm flap with antenna notch on left side to cover the radio as well as 2 tabs attached to the rear of the pocket with hook and loop affixed to permit overlap and fastening around the SCBA strap. The tabs shall be spaced to leave a gap of one (1) inch between each tab to permit adjusting the pocket /pouch on the vertical shoulder strap straddling the horizontal chest strap connection;
- (e) The notebook pocket shall be constructed of FR Cotton material patch 7 1/2" x 8" and shall contain a sewn pencil "tube" approximately one inch wide closest the coat storm flap.. The notebook pocket shall be placed on the left chest area inside the thermal liner, i.e, between the thermal liner and the user's body;
- (f) The slash pocket on the inside of the storm flap shall be constructed of moisture barrier and be approximately 7" x 7" or equivalent to accommodate the need to store examination gloves.

E8.15 Reflective Trim:

- (a) Protective coats shall have reflective trim placement based on a style of placement not the number of square inches of reflective trim;
- (b) Reflective trim placement shall be in accordance with the NFPA 1971 current edition at time of order placement;
- (c) Reflective trim configuration for the body shall consist of one circumferential band around the bottom of the coat near the hem and one circumferential band at the chest level as per NFPA 1971 current edition;
- (d) Reflective trim configuration for each sleeve shall be a staggered 360-degree visibility pattern meeting or exceeding the surface area of a circumferential band, between the wrist and elbow area to meet NFPA 1971 current edition;
- (e) Reflective trim shall be 2" Lime fluorescent 3M Scotchlite NFPA around the sleeves. The chest and hem trim shall be three (3) inch two-tone (silver on Lime) 3M Scotchlite NFPA;
- (f) The Fire Fighter's surname shall be reflective lettering two (2) or three (3) inches in height depending on the length of the user's name. Lettering shall be placed on a piece of outer shell material and not attached, it will be determined at the fitting if the member would prefer it attached to the back of the coat. If the member requested their surname to be attached, it shall be attached to the back of the coat beneath the hem trim;
- (g) Chest Light Holder Reverse clip on a patch with Velcro strap 1" x 9" strap with 3" Velcro on each end, two bar tacks to be 3 ½" apart. Top of strap to be 2 ½ " below patch right side.

E8.16 Hanger Loop:

- (a) Hanger loop to be supplied to prevent damage to thermal liner if coat is hung on a hook.

E8.17 Supplemental Thermal Protection:

- (a) A performance specification indicating thermal protective performance must be provided in the third party documentation accompanying the coat;
- (b) Supplemental thermal protection is required in the shoulder area and entire length of sleeves. Additional flat layers of thermal liner that increases the TPP to increase the thermal protection is not acceptable. The method to provide supplemental thermal protection shall be a thermal layering system that provides dead air space. One acceptable layering system utilizes strips of Nomex/Kevlar thermal liner material that runs from the neck opening outward, toward the arm, running the full length of the sleeve to the wrist area, forming sections of dead air insulation on the top and sides of the shoulder and arm areas. These strips of Nomex/Kevlar shall be sewn on the inside of the thermal liner between the thermal liner and moisture barrier. There shall be 5 (five) strips across the shoulder area to protect the area over the collar bone to the shoulder blade. Provide details of the method proposed to provide dead air space to supplement thermal protection.

E9. PROTECTIVE/TURNOUT TROUSERS

E9.1 General Design:

- (a) Protective trousers shall be of waist height design and the waistband strikes the user at the navel;
- (b) Each layer (outer shell, moisture barrier and thermal liner) of the body of the trousers shall be constructed with at least four (4) separate body panels. The body panels shall be shaped so as to provide a tailored fit to increase user comfort and to enhance body movement;
- (c) Panel design shall be full leg cut for wearing over station wear and knee length leather or rubber boots;
- (d) A separate fly panel shall be required to insure complete thermal and moisture protection;
- (e) An extra panel in crotch areas is preferred to insure comfort and freedom of movement.

E9.2 Modular Construction:

- (a) The protective trousers shall be constructed as two separate modules:
 - (i) the outer shell;
 - (ii) the liner consisting of the thermal liner and moisture barrier.
- (b) allowing each to be cleaned separately or replaced separately without replacing the entire protective trousers.

E9.3 The leg of the liner shall be cut two (3) inches shorter than the leg of the outer shell.

E9.4 The outer shell and the liner shall be secured to each other by:

- (a) Two snaps and dome fasteners with a Nomex strap at each leg (Dome fasteners shall be 1" from the bottom hem of the liner);
- (b) Dome fasteners on the inside of the thermal liner to prevent wear through of outer shell;
- (c) The Nomex strap to be secured with reinforced stitching 2" from the bottom hem of the outer shell on the side seams. The Nomex strap shall be 2" long x 3/4" wide.

E9.5 Waistband:

- (a) The waistband of the outer shell shall be 1 1/2" wide and shall be at least a double layer of outer shell material over reinforcing material such as moisture barrier;
- (b) The outer shell shall be provided with two (2) waist adjustment straps/tabs (take ups) with two (2) self locking strap buckles located at the top of the hip (1 on each side of waist);
- (c) Adjustment straps/tabs (take ups) shall be 1" x 10";
- (d) Adjustment straps/tabs (take ups) shall be constructed of double layer of black Advance material;

- (e) Trousers shall have a waist band which provides for waist band adjustment with either the postman locking strap buckles which shall be secured to outer shell with reinforced stitching on a two (2) inch loop strap of double layer outer shell material;
- (f) When waist band is adjusted the system will effectively transfer the weight of the protective trousers from the shoulders to the hips where weight is more efficiently carried.

E9.6 Fly Flap:

- (a) The fly flap shall ensure that the two sides of the protective trousers can be joined together and shall provide a continuous thermal liner/moisture barrier;
- (b) The fly flap shall be constructed of a layer of moisture barrier between two layers of outer shell material;
- (c) The fly flap shall be sewn to the left side outer shell;
- (d) The open end of the fly flap shall be fixed to the right side of the protective trousers fastened by a positive closure hook and dee system;
- (e) The positive closure hook and dee shall be attached at the top of the fly flap. The hook shall be attached to the main body of the protective trousers and the dee shall be attached to the fly flap;
- (f) The fly flap should be 6" at the waistline tapering down to two (2) inch at the crotch. Fly flap size may be determined by waist size and crotch rise.

E9.7 Integral Self Rescue Harness:

- (a) The self rescue harness shall be a internal component of the bunker pants and shall be removable for cleaning;
- (b) The harness shall meet the applicable current NFPA standard;
- (c) The design shall allow the firefighter to quickly connect a self rescue rope system without having to undo the turnout coat or remove SCBA.

E9.8 Suspenders:

- (a) Suspenders shall be part of the protective trousers but are not to be considered the main support;
- (b) Suspenders shall be designed to equalize pressure on the straps when the wearer bends side to side;
- (c) Suspender straps shall be two (2) inch heavy duty cotton with an elasticized area below the mid back; (2) inch two tone reflective trim (silver on lime) sewn onto the suspenders visible from the front and back;
- (d) Suspenders shall be removable and attached using a (2) inch tab system sewn onto the waist of the pants.

E9.9 Cuffs:

- (a) Cuffs shall be reinforced by hemming with an additional 2.0" piece of outer shell material, black in colour, sewn proportionately on each side of the outer shell;
- (b) A four (4) inch wide inseam guard made of outer shell material shall be to placed from reflective trim to hem;
- (c) Cuffs shall be a boot cut design with the rear of the cuff notched 1" to 1 ½" higher than the front and measured and constructed so as not to touch the ground when worn;
- (d) A (1) inch wide X (3) inch long seam guard shall be sewn vertically to protect the reflective trim seam.

E9.10 Knee Pads:

- (a) Protective trousers shall have protective knee pads of a minimum of 8" wide by 12" high, to provide thermal protection and cushioning while crawling or kneeling;

- (b) Knee pads shall be placed such that knees are completely covered when user is standing, kneeling or crawling. Knee pads shall be attached to the exterior of the outer shell;
- (c) Knee pads shall be:
 - (i) a heat channel design to allow flexing from two different directions permanently affixed to the outer shell and constructed of multiple horizontal and vertical panel layers of Nomex batt insulation covered with an external layer of Arashield

E9.11 Pockets:

- (a) Protective trousers shall have two (2) side leg pockets on, one (1) back pocket all constructed of outer shell material lined with Kevlar;
- (b) Side leg pockets shall be 9" wide x 9" high x 2" deep, full bellow with a 4" flap. (If user has short legs, pocket height shall be reduced proportionately.) Side leg pockets shall be centred over side seams. The top of the side leg pockets shall be even with the bottom hem of protective coat and the bottom of the pockets shall be above the knee. Each side leg pocket shall have a 4" flap, constructed of two layers of outer shell material, secured by a 1" x 4" hook fastener on pocket and a 2"x 4" loop fastener under flap. The flap design shall incorporate a rolled edge to permit easier opening with a gloved hand as well ensure the hook and loop fastening system is installed to grip on the vertical plane to strengthen the pocket closure ability to remain fastened if the pocket is bulged with contents.. Each side leg pocket shall have two drain holes (grommets) at the bottom of the bellow; Pockets to be lined with Kevlar;
- (c) Placement of rear patch pocket shall be four (4) inches below top of protective trousers and located on the left rear portion of the trousers.

E9.12 Reflective Trim:

- (a) Protective trousers shall have a circumferential band of three (3) inches wide two-tone (silver on lime) 3M Scotchlite reflective trim on each leg between cuff and knee pad;
- (b) Bottom of trim shall be six (6) inches from the bottom of the cuff.

E9.13 Radio Holder

- (a) A mic tab style radio holder made of outer shell material to be sewn on left hip of pants approximately (2) inches below waist. Tab dimensions are to provide an opening (1.75) inches wide by (2) inches deep.

E10. STRUCTURAL FIRE FIGHTING LEATHER BUNKER BOOT:

E10.1 The boot shall be a Pro Warrington Model 5006:

- (a) the boot shall be a pull on style constructed of full grain military grade leather, Advance Rip Stop and crosstech moisture barrier with a sloped back incorporated in the boot design;
- (b) Vibram fire and ice lug type sole;
- (c) 7.5 oz Kevlar thermal and puncture barrier;
- (d) Removable orthopedically designed insert;
- (e) Thermoplastic heel counter;
- (f) Steel shank and toe protection and a one piece stainless steel protective bottom plate;
- (g) A shin guard system;
- (h) Reflective heel markers that are integrated into the boot;
- (i) Reflective Goodyear power welt;
- (j) The boot shall have a barcode tracking system in place and strong pull on straps.