

IMPORTANT NOTICE TO ALL BIDDERS

ALL CURRENT **MASTER BID SECURITY** MEMBERSHIPS WILL EXPIRE ON **JUNE 30, 2008**. IN ORDER TO CONTINUE TO PARTICIPATE IN THE MASTER BID SECURITY PROGRAM STARTING JULY 1, 2008, YOU **MUST** REAPPLY. FOR FURTHER INFORMATION PLEASE GO TO:

<http://mbec.phila.gov/procurement/forms/masterbidsecurityappli2008.pdf>

VOLUNTARY PARTICIPATION AND COMMITMENT FORM (BID)

Please list any MBEC Certified and SBA vendors that will participate in this bid, including the Primary Bidder.

Minority (MBE), Women (WBE), and Disabled (DSBE) Owned Business Enterprises¹

Bid Number		Name of Bidder			
Primary Bidder	MBE <input type="checkbox"/>	WBE <input type="checkbox"/>	DSBE <input type="checkbox"/>	N/A <input type="checkbox"/>	SBA <input type="checkbox"/>
Federal Tax Identification #					
Amount Committed		Type of Work or Materials			
Dollar Amount	\$				
Percent of Total Bid	%				
Sub Contractor		MBE <input type="checkbox"/>	WBE <input type="checkbox"/>	DSBE <input type="checkbox"/>	
Vendor Name					
Federal Tax Identification #					
Amount Committed		Type of Work or Materials			
Dollar Amount	\$				
Percent of Total Bid	%				
Sub Contractor		MBE <input type="checkbox"/>	WBE <input type="checkbox"/>	DS-DBE <input type="checkbox"/>	
Vendor Name					
Federal Tax Identification #					
Amount Committed		Type of Work or Materials			
Dollar Amount	\$				
Percent of Total Bid	%				
Sub Contractor		MBE <input type="checkbox"/>	WBE <input type="checkbox"/>	DSBE <input type="checkbox"/>	
Vendor Name					
Federal Tax Identification #					
Amount Committed		Type of Work or Materials			
Dollar Amount	\$				
Percent of Total Bid	%				

REVISED 4-2007

¹ MBE/WBE/DSBES listed above **MUST** be certified by the MBEC prior to Bid Opening Date.

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SECTION 1: GENERAL BID SUBMISSION

1.1 TITLE: Protective Clothing for Firefighters

1.2 CONTRACT TERM: Date of Award to 4/30/09 (“Initial Term”), with an option to renew for up to three (3) additional one (1) year periods, (“the Renewal Term”) exercisable, at the City’s sole discretion, as of the expiration of the Initial Term or then current Renewal term. The City may, at its sole discretion, renew the contract for up to three (3) months at the beginning of each renewal period(s) (the “Additional Performance Period”), if a decision has been made not to renew the contract for an entire year.

1.2.1 The City shall exercise such sole option to renew the Contract Term by issuing a letter (the “Renewal Notice”) notifying the Contractor that the Contract is renewed for the Renewal Term or Additional Performance Period (identified by commencement and termination dates) that is specified in the Renewal Notice. The Contract shall be deemed to be renewed for such Renewal Term or Additional Performance Period, and Contractor shall be obligated to perform all terms and conditions of the Contract throughout such Renewal Term or Additional Performance Period, as of the effective date indicated on the City’s Renewal Notice, whether or not Contractor has agreed, verbally or in writing, to such renewal of the Contract term.

1.2.2 If an individual Performance Bond and/or Labor and Payment Bond is required under this Invitation and Bid, such bond(s) shall be and remain in full force and effect throughout the Initial Term, all Renewal Terms, any Additional Performance Period, and the period of any unexpired warranty provided or required under the Contract, without notice of Contract renewal by the City to the surety or the consent of the surety thereto. It is the sole responsibility of the Contractor to ensure that such bond(s) remain in full force and effect as provided in this Section 1.3.2, and failure to do so shall be an event of default pursuant to Section 19, Default, of the attached Terms and Conditions of Bidding and Contract.

If participation in the City’s Master Performance Security Program is required under this Invitation and Bid, Contractor shall pay the required annual fee for such participation for each Renewal Term upon the issuance of the Renewal Notice.

1.3 CONTRACT TYPE: REQUIREMENTS

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1.3.1 The following items are required in the operation of various City agencies as ordered. Exact quantities cannot now be determined but estimates thereof are listed herein. Quantities listed may be increased or decreased to meet the requirements of the City during the period of this contract. A minimum is not guaranteed. Purchase orders issued as a result of this bid will be for materials or services to be delivered generally on an as-needed basis. Successful bidders are cautioned not to deliver any materials or services without first being advised to do so by the ordering agency.

1.3.2 It is the intent of the Procurement Department to make an award for the period as stated above subject to the appropriation of funds in succeeding fiscal year/years by City Council. The City's fiscal year is from July 1st to June 30th inclusive.

Commodities or services on the bid to be ordered after the end of the fiscal year are subject to the issuance of purchase orders for the following fiscal years. The City is not liable for the award involving following fiscal years' funds until such orders are issued.

The successful bidder(s) obligation to deliver on such purchase orders shall not take effect until the orders are issued. To simplify the contract procedure, however, the successful vendor will be required to furnish a Performance Bond or Performance Security Fee to cover units awarded to him.

1.4 **METHODOLOGY OF ACQUISITION:** Purchase only.

1.5 **STATEMENT OF DIRECTION:**

It is the intent of the City of Philadelphia to make an award for **Protective Clothing for Firefighters** for the **Fire Department** as specified herein during the contract period.

1.6 **BID SECURITY**

1.6.1 Bid security shall be based upon **cumulative bid amount per Section 5.**

All bids submitted with a total greater than \$25,000.00 must be accompanied by the proper Bid Security.

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Bidders already enrolled in the City's Master Bid Security Program for Fiscal Year 2007 (July 1, 2006 to June 30, 2008) are not required to provide Bid Security if their bid total is \$500,000.00 or less (per paragraph 2 of "Terms and Conditions of Bidding and Contract").

1.6.2 **The Master Security Program** allows bidders to qualify for bid security for individual bids submitted during the covered bidding period provided the individual bid total is \$500,000.00 or less.

1.6.3 **Bids Opening July 1, 2007 through June 30, 2008**

Bidders may qualify for the Master Bid Security Program described above for **Fiscal Year 2007 - 2008 (July 1, 2007 – June 30, 2008)** by submitting a check in the amount of **\$120.00** made payable to the City of Philadelphia. The check should be submitted, under separate cover, to the Bid Unit Supervisor at least one day prior to the first bid that the bidder wants covered under the program and is non-refundable. Or if, and only if, the bidder chooses to submit the check for the Master Bid Security Program with their bid, the check **MUST** be in the form of a Certified, Treasurer's or Cashier's Check, Bank or United States Postal Money Order and is non-refundable.

1.6.4 If the bidder is not enrolled and does not intend to enroll; or if the total value of the bid submitted exceeds \$500,000.00, the Master Bid Security Program is not applicable. Bidders instead **MUST** submit with their bid a refundable Certified, Treasurer's or Cashier's Check, Bank Money Order or United States Postal Money Order in the amount as specified in Paragraph 2 entitled "Bid Security", of the "Terms and Conditions of Bidding and Contract".

1.7 **BID INFORMATION:**

1.7.1 All information concerning this bid will be contained in this bid document as issued or amended.

1.7.2 Information provided verbally by any City official shall not be binding or relevant.

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1.8 BID SUBMISSION:

- 1.8.1 Bid information must be submitted to the City of Philadelphia no later than the time and date for the bid opening.
- 1.8.2 Advertised sealed bids will be received and read publicly at 10:30 AM in Room #170A, 1st Floor, Municipal Services Building, 1401 JFK Boulevard.
- 1.8.3 Bid should be complete and include ALL information required as described in the various paragraphs of the bid specifications.
- 1.8.4 All pricing must be completed on the forms provided; be complete; and be in ink or typed.
- 1.8.5 The bid must be complete as to required bid signatures and corporate seal, and fully accept the terms and conditions contained in the bid.
- 1.8.6 **BID PROCESSING FEE:**
All bids submitted where the bid total is greater than \$25,000 shall be accompanied by the proper Bid Processing Fee. The fee shall be in the form of a separate check or money order in accordance with Paragraph 3 of the "Terms and Conditions of Bidding and Contract."
- 1.8.7 In accordance with the City of Philadelphia's Regulations Relating to Local Bidding Preferences for Procurement Contracts, this bid may be subject to a 5% local bid preference. In order to determine eligibility to receive the 5% preference, if applicable, bidder or subcontractor **must be certified at the time of the bid opening and must submit with the bid, the Local Business Entity Certification number** as issued by the Procurement Department for the prime contractor or the applicable subcontractor. If the prime relies upon its subcontractor's LBE status in order to be eligible for the preference, the name and certification number of the subcontractor **must** be submitted with the bid. **Failure to submit the prime's LBE certification number or the subcontractor's name and LBE certification number with the bid will deem bidder ineligible for the 5% preference.**

Further, by submission of this bid, bidder makes the following certification in connection with the grant of any local bidding preference:

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“I certify, that if awarded this contract on the basis of application of the LBE preference, my company or my subcontractor, throughout the entirety of this contract, will perform the majority of the work under this contract within the geographic limits of the City of Philadelphia, and I will, or cause my subcontractor to, maintain within the City a majority of the inventory or equipment that will be used on this contract or the amount of inventory that is customary for this industry.”

Prime or subcontractor’s LBE Certification Number _____

If applicable:

Subcontractor’s Name _____

NOTE: IF you wish to apply for Local Business Entity (LBE) certification, go to www.phil.gov/bids. Please allow sufficient time prior to bidding for processing of the LBE application.

1.8.8 When M-BE, W-BE or DS-BE ranges are required on an Invitation and Bid, bidders are reminded that the submission of a blank “Minority Business Enterprise Council Solicitation and Commitment Form” will be deemed non-responsive and ineligible for an award. Bidders are reminded to read carefully and entirely the “Bidder’s Guidelines relating to Executive Order 02-05”.

OR

If no M-BE, W-BE or DS-BE ranges are established for this Invitation and Bid, bidders are requested to complete the “Voluntary Participation and Commitment Form (Bid)” located after page 1 of the bid.

Completion of this form will not, in any way, impact the City’s determination concerning bidder’s responsiveness to the requirements of the bid and the award process. The information provided in the “Voluntary Participation and Commitment Form (Bid)” will be for the City’s information.

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1.8.9

BID QUESTIONS OR PROBLEMS

In preparing the bid response, should any bidder need clarification on the bid requirements, identify a discrepancy in the specifications, determine that a specified product has been discontinued or an alternate procedure is advised, etc.; then the bidder is **STRONGLY** encouraged to bring these issues to the attention of the Procurement Department’s Public Information Unit prior to the bid opening by calling (215) 686-4720 or 4721, or by faxing (215) 686-4716. **Questions, whether phoned or faxed, should be received no later than seven (7) calendar days prior to the scheduled opening date of the bid. The City reserves the right to only respond to those questions submitted prior to the stated deadline.** If it is in the City’s best interest to do so, the bid **MAY** be amended to reflect the proposed changes/modifications. **Exceptions taken DO NOT obligate the City to change the specifications. The City of Philadelphia, Procurement Department will notify all bidders in writing, by addendum duly issued, of any interpretations/changes made to specifications or instructions. The City will not accept responsibility for oral instructions, suggestions or changes by any City agency.**

Otherwise the successful bidder will have to provide the product or service exactly as defined in this bid, and in accordance with the specifications and requirements as listed in this Invitation and Bid.

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1.8.10 **CONTACT PERSON(S):**

PRE-AWARD:

Indicate below to whom in your firm questions concerning this Invitation and Bid should be directed:

Name: _____

Address: _____

City/State/ZC: _____

Telephone No.(____) _____ Ext.: _____

Fax No.(____) _____

E-mail address _____

State Company Web Site Address: _____

POST-AWARD:

Indicate below to whom in your firm questions concerning the Contract resulting from this Invitation and Bid should be directed:

Name: _____

Address: _____

City/State/ZC: _____

Telephone No.(____) _____ Ext.: _____

Fax No.(____) _____

E-mail address _____

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1.8.11 **ALTERNATES SUBMITTED:**

If an alternate to any item is offered, bidder must follow instructions in Paragraph 4 of “Terms and Conditions of Bidding and Contract”. State the brand name and the model number of each alternate offered. Detailed technical information on the alternate should accompany the bid.

Failure to state alternates will obligate bidder to provide material and/or service specified in the bid.

Any other product information submitted by bidder in connection with this bid is for purposes of product description, information and specification only. Bidder agrees that any additional terms or conditions contained therein, including, but not limited to, disclaimers or limitations of liability, do not become part of the bid.

1.9 **BIDDER QUALIFICATION:**

1.9.1 All bidders must be a bona fide manufacturer of, or dealer in, the article or service specified within the bid. To demonstrate this, bidders should submit the following reference information with their bid. References provided should be pertinent to the commodity or service requested in this Invitation and Bid; and demonstrate the bidder’s ability to perform on a contract of this size and scope.

Please note that reference information in each section must be completed. Failure to submit this information may result in the bidder’s disqualification.

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SECTION 1:

Customer References other than an employee or department of the City of Philadelphia, (excluding suppliers or financial institutions).

	A.	B.	C
Firm Name:	_____	_____	_____
Address:	_____	_____	_____
Contact:	_____	_____	_____
Phone #:	_____	_____	_____
Type Work:	_____	_____	_____
Years dealing w/your firm:	_____	_____	_____

SECTION 2:

Previous purchase order(s)/contract(s) with the City; (State "None" if applicable)

P.O./Contract Number:	_____	_____	_____
Department:	_____	_____	_____
Contact Name:	_____	_____	_____
Phone #:	_____	_____	_____
Item(s):	_____	_____	_____

NOTE: Do not provide the name and phone number of a Procurement Department Buyer in this section. Contact name(s) and phone number(s) must be from a City ordering department.

SECTION 2: SPECIFICATIONS

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- 2.1 Successful vendor shall be required to supply the City of Philadelphia's **FIRE** Department, **FIREFIGHTING DIVISION** with **PROTECTIVE CLOTHING FOR STRUCTURAL FIREFIGHTING (Bunker Gear)** as specified in Sections 2 and 5 of this Invitation and Bid.
- 2.2 The following articles of Protective Clothing required shall be provided to the exact specifications described and detailed in, Procurement Department Spec 7-U-31:08 Philadelphia Fire Department - Requirements and Specification for Structural Firefighting Clothing (March 2008)", which is provided with this Invitation and Bid.
- 2.2.1 **30890 002 040**
Coat per Procurement Department Spec 7-U-31: 08

Est. qty. - 300 EA.
- 2.2.2 **30890 002 041**
Pants per Procurement Department Spec 7-U-31: 08

Est. qty. - 350 EA.
- 2.2.3 **30890 002 042**
Suspenders per Procurement Department Spec 7-U-31: 08

Est. qty. - 100 EA.
- 2.2.4 **30890 002 043**
Suspenders, 48" long four way non stretch red with metal loops per Procurement Department Specs 7-U-31:08

Est. qty. - 100 EA
- 2.3 Refer to the "Procurement Department Spec. 7-U-31:08 Philadelphia Fire Department - Requirements and Specification for Structural Firefighting Clothing" Paragraph 1.2 for Sample Requirements for this bid.

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2.4 Engine 78 – Philadelphia International Airport

2.4.1 **30890 002 029**

Suspenders. 43" red, per Procurement Department Specs 7-U-4a:08.

Est. qty. – 30 EA

2.4.2 **30890 002 030**

Suspenders, 48" per Procurement Department Specs 7-U-4a:08.

Est. qty – 20 EA

2.4.3 **30890 002 031**

Gloves per Procurement Department Specs 7-U-4a:08.

Est. Qty. – 55 EA

2.4.4 **30890 002 045**

Coat, Proximity Firefighting with liner per Procurement Department Specs 7-U-4a:08.

Est. qty – 15 EA

2.4.5 **30890 002 046**

Pant, Proximity Fire Fighting with liner per Procurement Department Specs 7-U-4a:08.

Est. qty – 15 EA

In Section 5 “Pricing”, bidders are requested to provide the unit price of the items listed, in the unit of measure indicated, for the entire period of the contract.

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2.5 **WARRANTY**

Bidders will quote on items currently in production or in inventories at the time of bid opening. Bids on other than new items, or obsolete items, will not be accepted.

For items 2.2.1 – 2.2.4, materials must be guaranteed to be free from all defects as specified in paragraph 1.8 of Procurement Department Spec. 7-U-31: 08. The delivered product must equal or exceed the specifications and standards that are listed in Procurement Department Spec. 7-U-31: 08 to this Invitation and Bid.

2.6 **DELIVERY LOCATION**

2.6.1 Philadelphia Fire Academy
5200 Pennypack Street
Philadelphia, PA 19136

DIRECT TECHNICAL QUESTIONS TO:
Capt. Costa, Safety Officer
Phone: (215) 685-8971

2.6.2 Philadelphia International Airport
Location to be indicated on purchase order.

BIDDER TO COMPLETE SECTION 5, "TYPE OF TRANSPORT."

SECTION 3: BID EVALUATION AND AWARD

3.1 EVALUATION:

3.1.1 Bids will be evaluated by the Procurement Department.

3.1.2 Bids will be evaluated for responsiveness to the bid specifications and for responsibility of the bidders.

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3.1.3 Bids which are determined to be non-responsive for reasons of:

- (i) improper bid security
- (ii) improper bid execution
- (iii) incompleteness
- (iv) offering counter terms and conditions
- (v) improper or incomplete execution of MBEC documents (if applicable)

may be disqualified by the City without notice to the bidder. The decision of the City is final.

3.1.4 Bidders whose bids are determined to be non-responsible for reasons of bidder qualification shall be notified by the City of the reasons for the determination and may contest the finding of non-responsibility through the prescribed procedures described in paragraph 9 of "Terms and Conditions of Bidding and Contract".

3.2 AWARD:

3.2.1 This Invitation and Bid shall be awarded as a whole to the lowest responsive and responsible bidder. Bidder must bid all items to be eligible for award.

3.2.2 If the 5 % local bid preference is applicable, the total bid price or total section price of the certified Local Business Entity (LBE) will be multiplied by .95 and rounded to the second decimal place. The adjusted bid price of the LBE will then be used in determining the lowest responsive and responsible bidder.

Unless the Procurement Commissioner determines not to grant a preference for the reasons stated in subsection b., of the LBE Regulations, an LBE, whose bid is otherwise responsive and responsible and who has submitted the information required above, shall be granted a five percent bid preference on competitive bid (s) awards that are over \$25,000.00 and awarded as a whole or by section.

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3.2.3 **BASIS OF AWARD**

The prices used for the calculation of the Basis of Award must be the same prices as quoted in Section 5 - Pricing. In the event of a conflict between the prices quoted in Section 5, "Pricing", of the bid and those used in the Basis of Award, the prices quoted in the Pricing Section will prevail and will be used for calculations.

3.2.4 **PERFORMANCE SECURITY:**

Bidder's attention is directed to paragraph 14 of "Terms and Conditions of Bidding and Contract," for the required Performance Security.

Please note however, that all awards as a result of this bid will have a minimum contract amount of \$25,000.01. All awards at the \$25,000.01 amount will be subject to a \$50.00 Master Performance Security Fee.

Performance security shall be required for any subsequent renewal periods.

Performance Security - Multi-Year > \$500,000

If the total award amount exceeds \$500,000, the Master Performance Security does not apply. Upon notification of award, the City will require the successful vendor to provide an individual Performance Bond in the amount of 100% of the contract award as specified in the Letter of Award. For any subsequent renewal periods, sections 1.3.1 and 1.3.2 shall apply.

3.2.5 **City of Philadelphia-Business, Corporate and Slavery Era Insurance Disclosure**

In accordance with Section 17-104 of The Philadelphia Code, the Bidder, after execution of this Contract, will complete an affidavit certifying and representing that the Bidder (including any parent company, subsidiary, exclusive distributor or company affiliated with Bidder) has searched any and all records of the Bidder or any predecessor business entity regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era. The names of any slaves or slaveholders described in those records must be disclosed in the affidavit.

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The Bidder expressly understands and agrees that any false certification or representation in connection with this Paragraph and/or any failure to comply with the provisions of this Paragraph shall constitute a substantial breach of this Contract entitling the City to all rights and remedies provided in this Contract or otherwise available in law (including, but not limited to, Section 17-104 of the Philadelphia Code) or equity and the contract will be deemed voidable. In addition, it is understood that false certification or representation is subject to prosecution under Title 18 Pa.C.S.A. Section 4904.

3.2.6

INSURANCE:

Insurance is a requirement for this bid in accordance with Paragraph 15 of the “Terms and Conditions of Bidding and Contract”. No contract will be executed nor purchase order issued unless and until all required insurance certificates, in the required amount, are received. **All insurance MUST meet the following requirements:**

- Insured must be in the same name and address as the Bidder
- The insurance carrier must be rated “A” or better by AM Best
- The certificate holder must be the City of Philadelphia, and specifically named as an additional insured on the certificate in the “Description of Operations section”.
- Certificate must be signed by an authorized representative of the insurance company/carrier

All certificates are to be sent to the Office of Risk Management, One Parkway, 1515 Arch Street, 14th Floor, Philadelphia, PA 19102, Attn. Debbie Lawton or FAX to (215) 683-1705.

SECTION 4: CONTRACT MANAGEMENT

4.1 **CITY OF PHILADELPHIA RESPONSIBILITY:**

- 4.1.1 City agencies will be notified by Procurement of award(s) and will be provided with vendor(s), vendor contact(s) and applicable pricing. Departments will prepare and submit through the appropriate review channels, a purchase order against the applicable bid.

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Order Against Contracts

Subsequent to contract conformance of a Requirements bid, purchase orders will be issued at such time that the product and/or service is needed. Such purchase orders will show if delivery is to be made upon receipt of order, or only after notification by the using department.

- 4.1.2 Invoices shall be submitted after delivery and acceptance of the product or service by the City. The City attempts to process invoices in a timely manner. Delays can occur because of incomplete or inaccurate invoicing information. Please make sure that invoices contain the following information to help the City process payments to the Contractor as quickly as possible.
- (a) After the delivery or services have been completed the Contractor must submit three (3) copies of the invoice for payment to the receiving department listed on the purchase order.
 - (b) The invoice must correctly reference the purchase order number, the vendor name, address and Federal Employer Identification number.
 - (c) Checks will only be made payable to the company name as shown on the purchase order; the invoice must reflect this same company name as the “pay to”.
 - (d) The invoice must show the quantity and type of item or service and the price.
 - (e) The unit of purchase on the invoice must agree with the unit cited on the purchase order. Reference to the specific line item is helpful.
- 4.1.3 The using agencies and departments are responsible for monitoring the services and/or products delivered as described in the contract. If any problems arise, a letter should be sent to the vendor requesting resolution by a specified date. A copy should be sent to the buyer. If vendor does not resolve the breach of contract by the requested date the matter should be turned over to the buyer.

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4.1.4

ADD-ONS:

The City reserves the right to add, delete and/or acquire products/services that the vendor can supply that are similar to, but not specifically called for in this bid. The procedure for such acquisitions shall be as follows:

Procurement or the using department will obtain from the Vendor a letter (on his/her letterhead) verifying the items to be added. The letter shall include the complete description of the item, the location (if applicable), the bid number bid schedule number, the price to the City and the applicable contract period; and upon receipt and approval by the Procurement Department shall automatically become part of the contract. **The City, however, reserves the right to accept or reject the letter and to acquire the supplies or materials in the open market.**

4.1.5

MATERIALS TESTING:

The City of Philadelphia, may, during the life of this contract, supply a delivered product from this contract to the Materials Testing Laboratory. These products shall be tested to ensure conformance with bid specifications. If product fails, or is different from product supplied at award stage, rejection procedures will be implemented.

4.2 VENDOR RESPONSIBILITY:

4.2.1

Contractor may deliver only products, services or equipment (as applicable) as authorized in the contract and only after receipt of a purchase order or other authorized document from the Procurement Department. All orders must be in writing. Contractor shall not accept verbal delivery requests until after receipt of purchase order or other authorizing document from Procurement.

4.2.2

Contractor may deliver only products, services or equipment (as applicable) at the prices quoted in the contract and that are reflected on a purchase order or a change to a purchase order (a change to a purchase order is issued whenever the items, unit price, total amount, or terms and conditions change from the original purchase order).

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- 4.2.3 Contractors may deliver products, services or equipment (as applicable) up to the dollar limit of the purchase order and for the period shown on the purchase order. Contractors are requested to carefully monitor obligations against purchase orders and inform the departments of anticipated funding shortfalls.
- 4.2.4 **DELIVERY:**
Unless otherwise specified in Section 2, noted by bidder in Section 5, and/or approved by the Using Agency, delivery of product and/or service will be made within 30 days from date requested by Using Agency. **VENDOR NOTE:** In Section 5, specify delivery if other than 30 days.
- 4.2.4.1 **Liquidated Damages:**
Liquidated Damages in the amount of 5% of the unit price may be applied to each item which exceeds the delivery schedule/requirement.
- 4.2.5 In the event that the contractor receives an order for products, services or equipment not specifically priced and incorporated into the contract, they must:
- (i) bring this to the immediate attention of the Procurement Dept., and
 - (ii) notify the ordering agency in writing and refuse to deliver.
- 4.2.6 Should products, services, or equipment be delivered that are not specifically incorporated and priced into the contract, and/or be delivered without purchase order, the City shall have no obligation for payment.
- 4.2.7 For delivery of products or equipment, contractors shall honor and be paid for orders placed until the close of business of the date of purchase order expiration. Delivery of product may occur following purchase order expiration, so long as the order was placed prior to the purchase order expiration date.
- 4.2.8 For performance of services, contractor shall honor and be paid for orders placed until the close of business of the date of purchase order expiration. Performance of services may occur following purchase order expiration, so long as the order was placed prior to the purchase order expiration date.

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4.2.9 REPORTS

4.2.9.1 **RECYCLED USAGE REPORTS**

If the successful bidder is supplying products/ services in this contract that have recycled content, indicate which item(s) contain this content in Section 5: Pricing, (under the applicable item) and the percentage of recovered material and post consumer material as it applies.

The successful bidder will be required, on a quarterly basis, to furnish a usage report of the recycled products purchased by City Departments. Two reports will be required:

a. **Departmental Report**

A report by purchase order, current and cumulative, showing item(s) delivered, description, date, quantity, price, extended amount and to the extent possible, the percent of recovered material in delivered items.

b. **Item Report**

A report, current and cumulative, by item, showing description, date, quantity, price, extended amount, and to the extent possible, the percent of recovered material and percent of Post-Consumer material in delivered items.

All reports are to be submitted to the Recycling Office, Room 780, Municipal Services Building, Philadelphia, PA 19102, Attn: Recycled Content Administrator.

In support of the City of Philadelphia's Recycling Program, bidders are encouraged to supply with their bid, any information available regarding recycled material content in the products bid. The City is particularly interested in the type of recycled material used (such as paper, plastic, glass, metal, etc.); the percentage of recycled material contained in the product and the cost and product performance impact of increasing the percentage of recycled content.

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The City also requests information regarding any known or potential material content in the product that may be extracted and recycled after the product has served its intended purpose.

Product bid contains recycled content? YES NO

Is your product packaged and/or shipped in material containing recycled content? YES NO

Is your product recyclable after it has reached its intended end use? YES NO

Is your product shipped in returnable Containers? YES NO

4.2.10 **Invoices/Receipts:**

4.2.10.1 Successful bidder(s) agrees not to invoice more than once per month.

4.2.10.2 All invoices/receipts for parts shall have the signature and payroll ID number of the authorized/designated City personnel.

4.2.10.3 Invoices should be sent in triplicate to each ordering department

4.2.10.3.1 One (1) original and two (2) copies fully itemized invoices.

4.2.10.3.2 See also item 4.1.2 above.

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4.3 **PRICE INCREASE OR DECREASE:**

Contractor shall provide products at the prices set forth in Section 5 for the first contract period thereafter, service may be renewed under the terms and conditions of this agreement at the sole option of the City on an annual basis for additional one (1) year period(s). Contractor may increase prices for the three (3) renewal period(s) provided that; notice of price increases must be received, in writing, by the City at least 60 days prior to the expiration of each contract period and price increase letter shall be sent to the Buyer, Room 120 Municipal Services Building, 1401 JFK Blvd., Phila., PA 19102, referencing the Bid #, Contract #, period and showing item(s), descriptions and applicable pricing.

In no event shall the increased prices exceed contractor's published charges for non-educational state and local governments on the effective date of the adjustment, under similar terms and conditions.

Failure to notify the City within this sixty (60) day time frame shall result in the following:

the effective date of the price increase shall be sixty (60) days from the receipt of the price increase letter by the City;

or

if the letter is not received before the last day of the contract period, the prices for the renewal period shall be the same as the prices for the previous contract period.

NOTE: Price decreases may be forwarded to the Procurement Department buyer, in writing at any time during the contract period, to include any renewal period(s).

Failure to notify the City within the time frame specified above will result in a commensurate delay in implementing the price change.

4.4 **VENDOR ACCEPTANCES - IN SUBMITTING AN EXECUTED BID, THE BIDDER AGREES TO THE CONTRACT MANAGEMENT PROCEDURES IN THIS SECTION.**

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SECTION 5: PRICING

(PRICES QUOTED MAY NOT EXCEED THREE (3) DECIMAL PLACES)

NOTE:

Unit Price(s) quoted below (Section 5: Pricing), will prevail in case of any discrepancy(ies) between Unit Price and "Amount" and will be the determining factor in establishing applicable contract amount(s)/award.

	<u>Quantity</u>	<u>Unit of Measure</u>	<u>Unit Price</u>	<u>Total Amount</u>
5.1 30890 002 040 Coat per 2.2.1	300	EA	\$_____	\$_____
5.2 30890 002 041 Pants per 2.2.2	350	EA	\$_____	\$_____
5.3 30890 002 042 Suspenders per 2.2.3	100	EA	\$_____	\$_____
5.4 30890 002 043 Suspenders 48" per 2.2.4	100	EA	\$_____	\$_____
5.5 30890 002 029 Suspenders per 2.4.1	30	EA	\$_____	\$_____
5.6 30890 002 030 Suspenders 48" per 2.4.2	20	EA	\$_____	\$_____
5.7 30890 002 031 Gloves per 2.4.3	55	EA	\$_____	\$_____

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	<u>Quantity</u>	<u>Unit of Measure</u>	<u>Unit Price</u>	<u>Total Amount</u>
5.8 0890 002 045 Coat, per 2.4.4	15	EA	\$ _____	\$ _____
5.9 30890 002 046 Pants per 2.4.5	15	EA	\$ _____	\$ _____

Extended Total Bid Amount
(Unit Price x Quantity for All Items Bid.) \$ _____

BIDDER TO STATE HOW PRODUCT(S), SUPPLIES AND/OR PARTS ARE TO BE DELIVERED TO THE CITY OF PHILADELPHIA: (E.G. ON-SITE DELIVERY VIA AWARDED VENDOR'S TRUCK, UNITED PARCEL, U.S. POSTAL SERVICE ETC.).

TYPE OF TRANSPORT: _____

BIDDER SHALL SPECIFY IF DELIVERY IS OTHER THAN 30 DAYS: _____

**CITY OF PHILADELPHIA
PROCUREMENT DEPARTMENT**

STANDARDS DIVISION

**No. 7-U-3l:08
Supersedes No. 7-U-3k:08
Effective Date: March 2008**



SPECIFICATION

Philadelphia Fire Department

Requirements and Specification for Structural Firefighting Clothing

March, 2008

INTRODUCTION

The Philadelphia Fire Department is seeking bids for structural firefighting clothing. We are very serious about the quality and service of our protective clothing. The successful bidder is expected to maintain or exceed high standards in safety, comfort, and wear life that the Philadelphia Fire Department has come to enjoy in the past. Our overall objective is to offer our firefighters the most thermal protection, greatest breathability, lightest weight and best functional design available in the market today.

1. REQUIREMENTS

1.1 Field Test Requirement

Any manufacturer wanting to bid must have had their structural firefighting clothing fully and successfully evaluated by the Safety Office within the twelve months prior to this bid announcement, or have a 2005, or later, purchase order. This three-phase evaluation must include: a pre-examination of the garments prior to any field trial; a field trial conducted and controlled by the Safety Office; and a post-trial examination of the garments by the Safety Office.

1.2 Pre-Production Sample

At least two pre-production sample suits, each suit consisting of one coat and one trouser, (one suit for manufacturing and the other for the Safety Office) shall be provided within 7 days after the successful bidder receives award notification from the city. These suits shall be shipped to the PFD Safety Office, 5200 Pennypack Street, Philadelphia, PA 19136.

1.3 “No Surprises Policy”

The successful bidder will make no changes or substitutions, no matter how minor in nature, to the protective clothing without the approval of the Safety Office. The need or reason for the changes will be well documented with two signatures from the supplier and with the signature of the PFD Safety Officer.

1.4 Delivery and Penalty

Upon receipt of a purchase order, the manufacturer shall confirm in writing to the PFD Safety Office (facsimile or email is acceptable), the date the order was received. This date shall serve as the starting date for delivery requirements. There are three (3) types of deliveries classified by the PFD:

	TYPE	DELIVERY TIME REQUIREMENT
	1) Routine Order	45 Calendar Days
*	2) Emergency Order	7 Calendar Days
**	3) New Cadet class Order	20 Calendar Days

* Emergency Orders shall be determined by the Philadelphia Fire Department. It is the department's intent only to exercise this classification in times of urgent need and not as a routine ordering requirement.

** A new cadet class order will be given to the manufacturer as soon as possible prior to the start of the class.

All deliveries are to be made to the Safety Office, 5200 Pennypack Street, Philadelphia, PA 19136, within the specified delivery time, regardless of quantity. Ten percent (10%) will be deducted from the invoice price on any order received by the Safety Office, after the specified delivery time requirement, up to ten (10) days. For every day over ten (10) days that an order is late, an additional one percent (1%) per day will be deducted from the invoice price. Delays in deliveries due to scheduled plant closures will not be permitted.

1.5 Exceptions to Delivery Requirements

Any exceptions to these delivery requirements may result in disqualification of your bid proposal.

1.6 Stewardship

A factory representative shall visit the Philadelphia Fire Department quarterly (minimum) to provide inspection, trouble shooting, training, and problem resolution. A monthly electronic report shall be prepared and forwarded to the Safety Office indicating at a minimum: the type of garments shipped, the garment serial numbers, the firefighter names, the sizes (COAT: chest, coat length, and sleeve length; PANT: waist, inseam, and hip), the order quantity and shipped quantity, and the average number of days required to ship an order. The reports will be due at the Safety Office no more than 15 days after the end of each month.

1.7 Repairs

The Philadelphia Fire Department will select an appropriate individual to attend a two-day inspection, repair, and maintenance-training program. Topics to be covered include (but not limited to) inspection, measuring, methods of repair, determination of warranty work, and retirement considerations for all product lines purchased. The training will take place at the manufacturer's facility, and at no cost to the Philadelphia Fire Department

1.8 Warranty

A lifetime warranty shall be provided. This warranty is to cover defects in workmanship and materials for the useful life of these products when used by appropriately trained personnel following acceptable firefighting procedures and when the product's warning, use, and care instructions are followed. The manufacturer's warranty obligations shall be limited to, and agreed upon the by PFD, to their options of:

- 1) Repair or replace the product without charge.
- 2) Granting a credit to be applied toward the purchase of an equal or better garment in the amount equal to the original purchase price or prorated over the useful life of the product.
- 3) Refund the original purchase price.

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The term “useful life” is to be considered the length of time the garment can safely be worn for structural fire fighting activities, without needing major structural repairs that would be economically unfeasible. It is the Department’s opinion that useful life will vary from garment to garment, according to type and frequency of use, and the weight and type of materials used in the garment. In practical terms, the average useful life of a firefighter’s garment undergoing normal wear in the city of Philadelphia is 3-5 years.

1.9 Return Shipping Label

The manufacturer shall provide the Safety Office with shipping labels to return any items that are not acceptable for any reason.

2. GENERAL INFORMATION

2.1 EXCEPTIONS TO REQUIREMENTS AND / OR SPECIFICATIONS

If a bidder has any exceptions to these specifications, such exceptions must be stated in writing and describe in detail what is proposed in lieu of the specified requirement. The exception(s) must be referenced to the corresponding paragraph in these specifications. Any exception to these specifications must be explicitly noted in the bid proposal. Failure to do so will be considered sufficient cause to reject the bid offered. All bid exceptions which refer to, or effect, comfort, design, weight, construction, or performance of this specified product, shall be assessed by the Safety Office. Acceptance and/or compliance shall be the sole determination of the Safety Office.

2.2 PURPOSE & SCOPE

These specifications are intended to define the minimum requirements for the protective coat and protective trousers to be worn by members of the Philadelphia Fire Department for structural firefighting. These specifications are designed to meet and/or exceed all relevant provisions and requirements of NFPA 1971-Standard on Protective Ensemble for Structural Firefighting, 2007 edition.

The purpose of the clothing is to provide protection during structural fire fighting operations where there is a threat of fire or when certain physical hazards are likely to be encountered, such as during non-fire-related rescue operations, emergency medical operations, and victim extrication.

2.3 STANDARDS / CERTIFICATION

All garments produced shall meet or exceed the criteria set forth in the current edition of NFPA 1971, *STANDARD ON PROTECTIVE ENSEMBLES FOR STRUCTURAL FIRE FIGHTING*, 2007 Edition.

All components and composites used in the construction of garments shall be third party tested, certified and listed for compliance to NFPA 1971, 2007 Edition. Such certification shall be denoted by the certification label of the third party tester. If the above standard is revised during the contract period, the garments must reflect all relevant changes embodied within the revised version of the standard.

The manufacturer shall be registered to the ISO Standard 9001 to assure a satisfactory level of quality.

The manufacturer must also provide a written statement guaranteeing a lifetime warranty against defects in material and workmanship.

2.4 PATENT CONSIDERATIONS

The Seller agrees to defend the Buyer (The City of Philadelphia), at the Seller's own expense, in all suits, actions, or proceedings in which the Buyer is made a defendant for actual or alleged infringement of any United States of America, or foreign patent resulting from the Buyer's use of the goods purchased as a result of this invitation to bid. The Seller further agrees to pay and discharge any and all judgements or decrees which may be rendered in any such suit, action, or proceeding against the Buyer. The Seller agrees to indemnify and hold harmless the Buyer from any and all license, royalty, and proprietary fees or costs, including legal costs, which may arise out of the Buyer's purchase and use of goods supplied by the Seller. **The Seller expressly agrees that these covenants are irrevocable and perpetual.**

3. MATERIAL REQUIREMENTS

COMPOSITE PERFORMANCE: The garment composite, consisting of the outer shell, moisture barrier and thermal liner, shall provide a Thermal Protective Performance (TPP) of not less than 48 when tested in accordance with NFPA 1971 standard.

The garment composite, consisting of the outer shell, moisture barrier and thermal liner, shall provide a Total Heat Loss (THL) of not less than 270 when tested in accordance with NFPA 1971 standard.

The Heat Transfer Index rating shall be 25 seconds for the shoulder when measured at 2 psi (pounds per square inch) and 40 seconds for the knee when measured at 8 psi.

3.1 OUTER SHELL MATERIAL

The outer shell fabric for coats and pants shall consist of +/- 7.25 oz./sq. yd. 40% PBI®/60% KEVLAR® highly constructed ripstop weave with extremely durable FPE water resistant Teflon® FPE alloy reinforced with a matrix of 600 denier filament KEVLAR® cables. Color shall be black for all pants. Color shall be black for all coats with the exception that chief officer coats shall be natural in color.

3.2 MOISTURE BARRIER MATERIAL

The moisture barrier material shall be CROSSTECH® Type 2C (W.L. Gore and Associates, Inc.): 3.3 oz./sq. yd. NOMEX® IIIA woven pajama check substrate laminated to an enhanced bi-component expanded PTFE membrane; possessing total weight 5.0 oz./sq.yd

The only moisture barrier material to be used **anywhere** in the ensemble is the Gore Type 2C Crosstech Membrane laminated to 3.3 osy Nomex IIIA pajama check material.

3.3 THERMAL LINER MATERIAL

The thermal liner shall be 3.5 oz./sq. yd. Glide™ (NOMEX® filament/spun) face cloth quilted to one layer of apertured (11-13 apertures/sq. inch) E-89™ spunlace aramid 85% NOMEX®/15% KEVLAR® weighing approximately 1.5 oz./sq. yd with a durable water repellent finish. An additional layer of 3.0+ oz./sq. yd. NOMEX® Chambray face cloth with a Teflon water repellent finish will be positioned toward the outer shell (total weight +/- 8.0 oz./sq. yd.).

3.4 REFLECTIVE TRIM

All trim shall be sewn with four rows lockstitch 301, minimum six stitches/inch for most secure trim attachment.

All trim shall be: 3" Ventilated (Scotchlite™ II, triple trim) of lime/yellow with silver reflective stripe.

Coat trim shall be applied as follows: One 3" strip shall be set full circumference at the bottom sweep of the outer shell; one 3" strip shall be set around each sleeve within 2" above the cuff; one 3" strip shall be set around each sleeve just above the elbow; one 3" strip shall be set full circumference at the chest.

Pant trim shall be applied as follows: One strip set full circumference around the bottom of the cuff 2" to 3" from the bottom cuff.

3.5 REFLECTIVE LETTERING FOR LAST NAMES:

There shall be a 4" x 18" self-fabric one-line patch sewn to the upper back center (yoke) of coat. The fire fighter's name shall be sewn to the patch with 2" lime/yellow Scotchlite™ letters.

There shall be a 4" x 20" self-fabric one-line patch sewn to the back just below the waist of the pant. The fire fighter's name shall be sewn to the patch with 2" lime/yellow Scotchlite™ letters.

The cost of the coat and pants will include the lettering described above (8 letters on average).

4. CONSTRUCTION REQUIREMENTS

4.1 THREAD

All thread on these suits shall be Nomex, no less than Tex 90 on all major A seams and no less than Tex 70 on all major C and C seams.

4.2 STITCHING

All stitching shall conform to Federal Standard 751 and all other industry acceptable standards for producing quality, long lasting, protective clothing. No chain stitching will be used.

4.2.1 STRESS POINTS

All outer shell stress points, including top and bottom pocket corners, pocket flap corners, top and bottom of storm flap/fly shall be reinforced using a 42-stitch minimum bar tack.

4.3 SIZES

Coats shall measure 32", 35" or 29" in length from the center of the back collar seam to the hem of the coat and be made available in even chest sizes (two inch differential) with corresponding sleeve lengths (one inch differential) available in numerical measurements. Pants shall be made available in even waist sizes (two inch differential) with corresponding inseam lengths (one inch differential) available in numerical measurements.

Coats will be available in Shorter and Longer lengths by special order at no additional cost.

5. LABELING REQUIREMENTS

5.1 LABELING

Each garment shall have a garment label(s) permanently and conspicuously attached stating at least the following language, as well as detailed warning instructions provided by the manufacturer.

Do Not Remove This Label

THIS STRUCTURAL FIREFIGHTING PROTECTIVE GARMENT MEETS THE GARMENT REQUIREMENTS OF NFPA 1971, 2007 EDITION

5.1.1 TRACKING LABEL SYSTEM: There shall be a PDF417, two dimensional bar code label permanently affixed to each garment for tracking purposes. The bar code shall contain a minimum of the following information:

- a. unique serial number
- b. item description (brand, model, material color)
- c. lot information (date of mfg., size, etc.)
- d. material description
- e. the standard to which the garment is compliant

The bar code shall be able to withstand customary wash and wear cycles. The PDF417 bar code must incorporate a minimum of a 30% “error correction” capability.

5.2 USER INFORMATION GUIDE

Each garment shall include a *User Information Guide* with information required by NFPA 1971. This guide shall include:

- (a) Pre-use information:
 - Safety considerations.
 - Limitations of use.
 - Garment marking recommendations and restrictions.
 - A statement that most performance properties of the garment cannot be tested by the user in the field.
 - Warranty information.
- (b) Preparation for use:
 - Sizing/adjustment.
 - Recommended storage practices
- (c) Inspection:
 - Inspection frequency and details.

- (d) Don/Doff:
 - Donning and doffing procedures.
 - Sizing and adjustment procedures.
 - Interface issues.

- (e) Use:
 - Proper use consistent with NFPA 1500, *Standard on Fire Department, Occupational Safety and Health Program*, and 29 CFR 1910, 132.

- (f) Maintenance and Cleaning:
 - Cleaning instructions and precautions with a statement advising users not to use garments that are not thoroughly cleaned and dried.
 - Inspection details.
 - Maintenance criteria and methods of repair where applicable.
 - Decontamination procedures for both chemical and biological contamination.

- (g) Retirement and disposal:
 - Retirement and disposal criteria and considerations.

- (h) Drag Rescue Device (DRD)
 - Use, inspection, maintenance, cleaning and retirement of the DRD.

5.3 WARRANTY

Each garment shall have a lifetime warranty against defects in material and workmanship, which is detailed on a card attached to each garment.

6. COAT REQUIREMENTS

6.1 COAT CONSTRUCTION

The coat shall be designed of multi-piece construction which shall include one back panel, two front panels, and two radial underarm panels.

The coat shell and liner shall be oversized to assure proper chest fit and insuring maximum mobility without restriction of arms and shoulders. The coat shall measure 32", 35" in length from the center of the back collar seam to the hem of the coat (Female sizes 29", 32").

6.2 MOISTURE BARRIER/THERMAL LINER CONSTRUCTION

Design shall be compatible with the outer shell so that the liner does not buckle, pull, or otherwise restrict body motion. The left and right fronts of the moisture barrier/thermal liner shall be attached to the facings at the front closure of the outer shell. The neck of the moisture barrier/thermal liner shall be secured to the neck of the outer shell collar such that when donning the coat an arm may not be accidentally caught between the outer shell and its inner linings along the neck between the armholes. Liner shall have a 2" wide, 2-ply CROSSTECH®/NOMEX® pajama check extension sewn the full length of the neck. FR loop, 3/4" wide, shall be sewn on extension to tuck into pleat in outer shell collar. The liner shall have one 8.5" x 8.5" internal pocket which shall be made of black outer shell material. The liner pocket shall be located on the left side of coat liner. The moisture barrier shall be completely sewn to a treated NOMEX® facecloth at its perimeter. The moisture barrier substrate/facecloth combination will be sewn to the quilted thermal liner at its perimeter with the breathable membrane oriented inward toward the thermal liner and away from the outer shell. The quilted thermal liner will be oriented toward the wearer. All moisture barrier seams shall be sealed as required by NFPA 1971. The moisture barrier/thermal liner shall finish no more than 1" from the cuffs and 3" from the hem.

6.3 MOISTURE BARRIER/THERMAL LINER ATTACHMENT

The moisture barrier/thermal liner shall be completely detachable from the outer shell for ease of cleaning by the use of hook and loop, zippers, and snaps. There shall be a brass zipper down each front facing, hook and loop along the neck to interface with collar as well as hook and loop and one snap at each sleeve end. There shall also be a 1"x3" self-fabric strap with one end bartacked to coat shell & opposite end loose with one female non-logo snap, one male snap on liner centered at bottom rear panel to align with the female snap.

6.4 COAT LINER INSPECTION SYSTEM

There shall be an opening located on the coat liner approximately 11” in length at the center back of the neck separating the thermal barrier and moisture barrier. This opening will provide the ability to completely invert the coat liner to properly view the integrity of the entire liner system. There shall be one piece .75”x 4” FR loop sewn to the back side of the liner system with a corresponding piece of .75”x 4” FR hook sewn to the inside of the outer shell to ensure proper alignment when installing the liner system into the outer shell. This Liner Inspection System is completely hidden when the liner is properly installed into the outer shell.

6.5 COLLAR

The collar shall be of three piece contoured 4-layer configuration such that when the collar is raised it shall remain standing while providing continuous thermal and moisture protection around the neck and face. To ensure this protection, the two layers of outer shell collar shall be fully lined with one layer of Crosstech moisture barrier material and two layers of 1.5 oz. apertured E-89™ thermal liner. The collar shall provide proper interface with liner to insure no moisture penetration through the collar seam to inside of coat. The collar shall be contoured and shall completely cover the neck and throat area when in the raised position. Raised height shall be approximately four inches (4”), with a contoured overlap at the front of the coat. Collar closure shall be provided by FR hook and loop 1.5” x 4”, with hook portion sewn on right side of collar, and loop portion sewn on left, set horizontal. Collar shall be of such design so as not to interfere with SCBA face masks, nor helmet. When examined prior to donning, the turned-up collar shall completely wrap around the front of the neck opening such that left and right collars touch or overlap to maximize facial protection. The three piece contoured 4-layer collar shall be sewn with a pleat on the innermost layer. Pleat shall have 3/4” FR hook sewn on the underside to engage the moisture barrier extension on the liner.

6.6 HANGER LOOP

An external hanger loop constructed of a double layer of outer shell material and reinforced with two 42-stitch bartacks shall be provided on the outside of the coat at the collar seam. It shall be designed to provide long service and shall not tear or separate from the coat when the coat is hung by the hanger loop, loaded evenly with a weight of 80 lbs. and allowed to hang for one minute.

6.7 DRAG RESCUE DEVICE (DRD)

The Fire Fighter Recovery Harness™ shall be constructed of a one and one-half inch wide KEVLAR® strap that shall be installed between the outer shell and the thermal liner. This harness shall have a hand loop (16” in circumference) that exits the outer shell through a 2” polymer coated aramid reinforced slot on the back of the coat just below the collar and is held in place by means of a piece of 1.5” x 2” hook on the strap and a piece of 1” x 2” loop attached to the outer shell. This strap is then secured under a 2.25” x 5.25” flap that is sewn in at the neck /collar area. Two pieces 1” x 2” loop shall be set vertically on shell to align with two pieces of 1” x 2” hook set vertically to the underside of the flap.

The harness is also held in proper alignment by means of a 2" x 2" piece of loop placed on the inside of the outer shell underneath the chest trim that corresponds to a piece of 1.5"x 2" hook located on the harness. Two 1" x 3.5" self-fabric straps with 1" x 2" hook on one end and 1" x 2" loop on other end shall be set to coat in the shoulder cap area to keep straps in proper position for use.

6.8 THERMAL REINFORCED YOKE

A layer of (3.0 oz./sq. yd. treated Chambray (NOMEX® spun) face cloth quilted to araflo/E-89™ (total weight +/- 6.0-6.8 oz./sq. yd.)) and a layer of quilted Araflo®/E-89™ with no facecloth shall be positioned between the moisture barrier and thermal liner for extra thermal protection in a high heat and compression area of the coat. It shall be sewn to the inside of the upper back portion of the thermal liner across the upper back from the back shoulder and collar seams 7" down, over the tops of shoulders and down the front approximately 4" ending at the armhole.

6.9 SHOULDER CAPS

A four inch wide area at the top of the shoulders extending six inches from the collar seam shall be capped with outer shell material for abrasion resistance and thermal protection.

6.10 SLEEVE WELL/WRISTLET MOUNTING

A combination (3.0 oz./sq. yd. treated Chambray (NOMEX® spun) face cloth quilted to araflo/E-89™ (Total weight +/- 6.0-6.8 oz./sq. yd.)) and one layer of breathable CROSSTECH® (Type 2C) moisture barrier leader shall be sewn no more than 1" back from the combination liner sleeve end to form a sleeve well. One male snap and one .75" wide strip of FR loop shall be sewn full circumference to the end of the thermal liner/CROSSTECH® (Type 2C) moisture barrier leader to help secure the combination liner to the outer shell. This sleeve well shall prevent water and hazardous materials from entering the sleeve when arms are in a raised position. The combination liner sleeve ends shall be inserted into the outer shell sleeve ends by means of lining up the male snaps then attaching the FR loop fastener of the combination liner sleeve end with the female snap and FR hook fastener of the outer shell cuff. This method of combination liner attachment shall prevent any gaps from occurring between the combination liner and sleeve well during a full range of motion. The combination liner shall extend to within 1" of the sleeve end.

6.11 WRISTLETS

An internal wristlet shall consist of a 2-ply NOMEX® Spandex® knit not less than 8" in length. Wristlets shall be completely over the palm with a thumbhole to prevent the wristlets from sliding back. Wristlets shall be double stitched and bound to the moisture barrier/thermal liner providing extended thermal and slash protection.

6.12 CUFFS

The cuff of the sleeve shall be reinforced with a binding of black polymer coated aramid not less than 3" in total width for abrasion resistance and thermal protection. At least 2" of the cuff reinforcement shall extend down the interior of the outer shell sleeve with a .75" wide strip of FR hook sewn full circumference to the topside of the cuff reinforcement. For added safety, one female snap fastener shall be set in the hook fastener to assist in attaching outer shell to moisture barrier/thermal liner.

6.13 THERMAL FRONT PANEL CONSTRUCTION

There shall be continuous thermal and moisture protection around the entire torso including the coat area beneath the storm flap. To ensure this protection, as well as reduce potential for wicking moisture to inside of liner, both right and left inside front facings of the coat outer shell shall incorporate outer shell fabric and CROSSTECH moisture barrier, extending from collar to hem.

6.14 COAT FRONT CLOSURE DESIGN

The complete outer shell coat front closure design shall consist of a FRONT CLOSURE SYSTEM (snap-hook and dee-ring type) completely protected by an OUTSIDE STORM FLAP which shall have its own, independent STORM FLAP CLOSURE SYSTEM.

6.14.1 COAT FRONT CLOSURES

The front closure shall consist of (4) snap hooks that shall be set with (1) leather reinforced backing under the outer shell material covering all three rivets of each snap hook, within ¼" of right side of the coat front underneath the storm flap. Opposite of each snap hook, a corresponding dee ring set to the underside of the leading edge of the left coat front with (2) leather reinforced rivets. Three (3) glove snaps shall be placed between the inside hook and dee rings to assure proper closure.

6.15 STORM FLAP

A storm flap measuring not less than 5" wide, nor less than 22" in length shall be set on the outside of the right side of the coat opening for maximum thermal protection and clear drainage. The inner lining of the storm flap shall be Type 2C CROSSTECH moisture barrier meeting all requirements for moisture barriers (Sect.3.2) sandwiched between two (2) layers of outer shell fabric. The storm flap shall be reinforced at top and bottom with bartacks

6.15.1 STORM FLAP CLOSURE

The storm flap closure shall consist of 2" wide loop on the inner side of the storm flap and 2" wide hook attachment on the left coat front. The FR hook and loop closure shall extend the full length of the outer storm flap eliminating all exposed frontal hardware.

6.16 COAT POCKETS

6.16.1 GLOVE POCKET:

There shall be a 9" X 10" pocket with a poly-coated aramid welt in a vertical orientation opening. It shall be inserted between the second and third hooks on the left front of the front closure, approximately ½" from where storm flap attaches to the outer shell. The opening of the pocket shall be no less than 6.5" vertically. The furthest portion of the pocket from the opening shall be bartacked to the outer shell at the top corner leaving the bottom corner loose and allowed to move freely. Outside of the pocket shall be black NOMEX® ripstop material & inside of pocket CROSSTECH®; set under stormflap. The pocket, when completed, shall be between the outer shell and moisture barrier/thermal liner, and easily accessible with a user's right hand while wearing the coat. The pocket shall be attached to the front closure with lock stitching and bartack reinforcement at the top and bottom of the pocket.

6.16.2 HANDWARMER/SEMI-BELLOWS POCKET (2):

There shall be a 9" x 9" (8" for 29" coats) semi-bellow & handwarmer combination pocket that expands by means of side and bottom gussets to a thickness of 0" in front only and 1.5" in back. The pocket shall be set at the bottom of the coat hem and reflective trim shall be set on each pocket (1 each side). Pocket and flap shall be set with stitch 301, seam Ssb-2 with each corner of pocket opening and top corners of flap reinforced with bar tacks for additional strength. Drainage of moisture to be provided by 2 brass eyelets. Each pocket shall have a 6" vertical opening cut at the upper rear with a 1.5" x 6" loop on bellow side and 1.5"x 6" hook on shell (concealed hand-warmer pocket). Each pocket flap shall measure 3"x 11". A hook and loop fastener closure shall system shall be set with 1.5" x 6" loop fastener set horizontally on the outside edge of the pocket opening with corresponding 1.5" x 6" hook fastener set horizontally on the underside of the flap.

6.16.3 RADIO POCKET:

There shall be a 3.5" wide x 7" deep full bellows radio pocket that expands by means of side and front gussets to a thickness of 2" in front and back, and be set to the left chest. Pocket and flap shall be set with stitch 301, seam Ssb-2 with the top and bottom pocket corners and top corners of flap reinforced with a minimum 42-stitch bar tack. A brass eyelet shall provide drainage of moisture. Pocket flap shall be 4.5"(W)x 5"(D) and centered over the pocket opening. Pocket shall be fully lined all 3 sides inside pocket with CROSSTECH® lining. Pocket flap shall close to the pocket top using 1 piece of 1"x 2" loop on pocket horizontally and 1 piece of 1"x 2" hook on flap vertically. Pocket flap shall include a V-notch positioned on left side of the flap to accommodate an antenna.

Location to be set to left chest with bottom of pocket to be even with bottom edge of upper trim band, and placed with approximately a 1" gap between storm flap edge and inside edge of pocket.

6.16.4 PATCH POCKET (STORM FLAP):

There shall be a 3 ½" x 5" patch pocket sewn on inside of storm flap 6" down from top. There shall be no lining & no flap and must have a 3" opening. The pocket shall be constructed of outer shell material, lock stitched on three sides, open at the top. The top will have a finished edge.

6.17 COAT ACCESSORIES

6.17.1 UTILITY SNAP HOOK:

A single nonferrous rust resistant three point snap hook shall be attached to the chest body, right side approximately 3" from the storm flap closure and down 3" from the top of the storm flap. The snap hook shall be attached to the outer shell with leather backed non ferrous rust resistant rivets.

6.17.2 UTILITY TAB:

There shall be a 1" x 3" self-fabric utility tab bartacked on each end 1" below bottom of utility snap hook set to the right chest. Bar tacks shall be a minimum 42-stitch bar tack.

6.17.3 MIC TAB:

There shall be a .75" x 4.25" self-fabric mic tab with hard leather inside, bartacked on each end set to the left chest above the radio pocket (seam at the bottom). Bar tacks shall be a minimum 42-stitch bar tack. Location shall be centered 4" above the top of the radio pocket.

7. PANT REQUIREMENTS

7.1 PANT CONSTRUCTION

The traditional style pant shall be of multi-piece construction and designed to interface with a traditional style coat.

7.2 MOISTURE BARRIER/THERMAL LINER CONSTRUCTION

Design shall be compatible with the outer shell so that the liner does not buckle, pull, or otherwise restrict body motion. To deter the wicking of moisture up the thermal liner leg the bottom nine inches of each thermal leg shall be constructed of (3.0 oz./sq. yd. treated Chambray (NOMEX® spun) face cloth quilted to araflo/E-89™ (total weight +/- 6.0-6.8 oz./sq. yd.)). The waist of the moisture barrier/thermal liner shall be secured to the waist of the outer shell such that when donning the pant a leg may not be accidentally caught between the outer shell and its inner linings along the waist and between the legs of the pant. For added thermal protection in the knee, an additional layer of uninterrupted 1/8" thick, fire resistant closed cell foam shall be positioned between the moisture barrier and thermal liner. The moisture barrier shall be completely sewn to a treated NOMEX® facecloth at its perimeter. The moisture barrier substrate/facecloth combination will be sewn to the quilted thermal liner at its perimeter with the breathable membrane oriented inward toward the thermal liner and away from the outer shell. The quilted thermal liner will be oriented toward the wearer. All moisture barrier seams shall be sealed as required by NFPA 1971. The moisture barrier/thermal liner shall finish no more than 3" from the pant cuffs.

7.3 MOISTURE BARRIER/THERMAL LINER ATTACHMENT

The moisture barrier/thermal liner shall be completely detachable from the outer shell for ease of cleaning by using snaps. Eight evenly spaced snaps shall secure the liner to the integral waistband; two snaps shall be set in leather leg tabs at each leg end.

7.4 PANT LINER INSPECTION SYSTEM

There shall be an opening located on the pant liner system to the right side of the waist separating the thermal barrier and moisture barrier, approximately 10" in length. This opening will provide the ability to completely invert the pant liner to properly view the integrity of the entire liner system. There shall be a piece of 1" x 3" FR loop sewn to the moisture barrier 3" over from beginning of opening and a corresponding piece of 1" x 3" FR hook sewn to the inside of the outer shell to ensure proper alignment when installing the liner system into the outer shell. This Liner Inspection System is completely hidden when the liner is properly installed into the outer shell.

7.5 STORM FLY

The outer shell shall have an overlapping fly front running the full length of the fly on the left side. The flap shall not be less than 2.5" wide at the waistband. The bottom of the fly shall be reinforced with one 42-stitch bartack.

7.5.1 STORM FLY CLOSURE

There shall be a hook and dee ring closure shall be used for a quick one-motion closure. The hook shall be 2.5" in length, made of a zinc non-ferrous metal alloy and weigh 1.2 oz. +5%. It shall be securely fastened to the pant by means of a 5/8" wide x 5 1/8" long treated leather belting take-up strap looped through the rear of the hook and triple riveted to the pant shell. The back leather belting strap shall fasten thru a buckle of 5/8" x 2" leather strap attached with two rivets. The dee shall be made of a non-ferrous metal alloy 2" long x 1 1/16" wide and attached to the fly flap with two rivets.

The storm fly shall be held closed along its length by means of a hook and loop fastener closure 1.5" minimum width, along the leading edge for a distance of not less than 6" from the bottom of the fly closure to the waist area for proper alignment and secure closure. The storm fly shall be outer shell material, lined with a 3.5" strip of CROSSTECH® (Type 2C) moisture barrier material to prevent wicking.

7.5.2 THERMAL FLY ASSEMBLY

The moisture barrier/thermal liner shall be constructed with an extension on the left side at the waist of all layers of the fly opening to assure continuous thermal and moisture protection. This overlap shall be positioned between the layers of the outside storm fly. A 3/4" wide x 9" long hook fastener shall be sewn to the moisture barrier/thermal liner to engage corresponding loop fastener on the underside of the outside storm fly.

7.6 WAISTBAND

The waist of the pants shall be reinforced on the inside with two-ply of outer shell material not less than 1.5" in width. The pant waist shall be turned under to provide double material strength with the independent waistband, which shall then be double-stitched to the outer shell. Eight suspender buttons with black leather backing shall be appropriately spaced around the waistband to accommodate the use of suspenders.

7.7 KNEE REINFORCEMENT

The knee shall incorporate a comfort/mobility design in all layers. This design shall allow for a natural bending motion of the knee. The knee shall be black polymer coated aramid material and measure 9" across the bottom, not less than 7" on the sides and gradually increase to 12" at the center point at the apex. The apex of the knee shall allow for not less than a 1.5" bellows at the center. The thread shall be hidden at the bottom of the knee. For added thermal protection in the knee, an additional layer of uninterrupted 1/8" thick, fire resistant closed cell foam material shall be positioned between the outer shell and the reinforcement layer.

7.8 CUFFS

The cuff area of the pant shall be reinforced with a binding of black polymer coated aramid not less than 2" in total width for greater strength, abrasion resistance, and thermal protection.

7.9 EXTERNAL TAKE-UPS

There shall be two waist take up straps sewn and bar tacked 2 ½" down from the top of the waistband. One strap shall be installed on the right side and one on the left side constructed out of one piece of shell material folded to two layers and sewn to form a 1/2" wide strap. Each strap shall be a minimum of 8 ½" in length. These take-up straps shall have a 5/8" nickel plated *postman style* slide buckle which shall be attached by a piece of shell material six (6) inches in length folded to form two layers. The strap is sewn to form an attachment strap approximately three (3) inches in length designed for quick take-up adjustment when pulling forward.

7.10 FULL BELLOW POCKETS (2)

There shall be 10" wide x 10" deep outside full bellows pockets that expand by means of side and bottom gussets to a thickness of 2" in front and back set (1) to each thigh. Pockets shall be reinforced with KEVLAR® lined all 3 sides 5" up on inside pocket. Pocket and flap shall be set with stitch 301, seam Ssb-2 with the top and bottom pocket corners and top corners of flap reinforced with bar tacks for additional strength. Drainage of moisture to be provided by 2 brass eyelets. Pocket flaps shall be 11" x 5" and shall be centered over the pocket. A hook and loop fastener closure system shall be set with 2" x 6" loop fastener horizontally on the pocket and 2" x 6" hook fastener horizontally on the underside of the flap.

7.11 SUSPENDERS

7.11.1 REGULAR LENGTH:

There shall be traditional styled 43" red suspenders allowing for eight points of attachment to a traditional or contoured waist bunker pant with traditional suspender buttons. Two 27" shoulder straps shall be constructed as follows: 2" wide elastic polyester webbing shall be fed through the top half of a steel double dee ring and secured with a two-needle lock-stitch. Shoulder straps shall be adjustable using steel slide adjusters allowing the user to vary the length of the suspenders for proper fit. Four points of attachment shall be constructed of 5.5 oz/sq. ft. vegetable tanned leather which is die-cut into four straps riveted to a 1" piece of leather fed through the bottom half of the steel double dee ring. The four straps shall have buttonhole loops which allow for a secure fit around suspenders buttons and will not easily disconnect when in use. Leather loops shall be configured such that they rotate around the suspenders buttons allowing for freedom of motion. A triangular leather back junction constructed of one layer of 5.5 oz/sq. ft. vegetable tanned leather and one layer of chromed, tanned, split leather shall be used to join the two shoulder straps to four back straps.

Four 11” back straps made of 2” wide elastic webbing shall be joined with a 2” overlap at the end of each shoulder strap beneath the triangular leather back junction. The ends of each back strap shall be secured to 5.5 oz/sq. ft. vegetable tanned leather which is die-cut into four buttonhole loops allowing for a secure fit around suspenders buttons and will not easily disconnect when in use. Leather loops shall be configured such that they rotate around the suspenders buttons allowing for freedom of motion.

7.11.2 LONG LENGTH:

There shall be traditional styled 48” red suspenders allowing for eight points of attachment to a traditional or contoured waist bunker pant with traditional suspender buttons. Two 31” shoulder straps shall be constructed as follows: 2” wide non-elastic polyester webbing shall be fed through the top half of a steel double dee ring and secured with a two-needle lock-stitch. Shoulder straps shall be adjustable using steel slide adjusters allowing the user to vary the length of the suspenders for proper fit. Two pieces of 2” wide non-elastic webbing shall be fed through the bottom half of the steel double dee ring and be secured to 2” buttonhole peerless loops constructed of .080 diameter wire with a zinc plate finish. This will allow for four (4) points of attachment. Each peerless loop shall be configured such that they easily rotate around a suspender button to allow for freedom of motion. A triangular leather back junction constructed of one layer of 5.5 oz/sq. ft. vegetable tanned leather and one layer of chromed, tanned, split leather shall be used to join the non-elastic shoulder straps to four elastic back straps. Four 10” back straps made of 2” wide elastic webbing shall be joined with a 2” overlap at the end of each shoulder strap beneath the triangular leather back junction. The ends of each back strap shall be secured to 2” buttonhole peerless loops constructed of .080 diameter wire with a zinc plate finish. This will allow for four (4) points of attachment. Each peerless loop shall be configured such that they easily rotate around a suspender button to allow for freedom of motion.

NOTE: Each pair of pants purchased must be supplied with a pair of suspenders included in the price. However, the bidder must also provide a price for the purchase of additional suspenders individually; in both regular and long lengths.

SPECIFICATION



**PHILADELPHIA AIRPORT
PROXIMITY CLOTHING SPECIFICATIONS
NFPA 1971, 2007 EDITION**

SCOPE: The purpose of this clothing is to provide protection for proximity fire fighting only in protecting the body (excluding: head, hands, and feet) against temperature extremes, steam, hot water, hot particles and other hazards encountered during aircraft fire fighting, bulk flammable liquid fire fighting, and similar situations releasing high levels of radiant heat. This protective clothing is not designed to be kept in direct contact with flames.

NFPA 1971: All construction, features, and fabrics in this specification must meet or exceed the requirements of proposed NFPA Standard 1971, 2007 Edition, OSHA 1910, Subpart L, and Cal-OSHA title 8, Article 10.1, Para 3406. Such features, fabrics, construction, and other details, whether specifically enumerated in this specification or not, are the responsibility of the dealer, agent, manufacturer or other seller. Implied or direct conflicts between this specification and proposed NFPA 1971, OSHA, Subpart L, and Cal-OSHA are not the intention of this specification, and will be eliminated by notifying the issuing authority and subsequent alteration of the specification.

OUTER SHELL MATERIAL: 8.5 oz./sq. yd. 70% KEVLAR®/30% PBI® knit with an aluminized exterior surface.

MOISTURE BARRIER MATERIAL: NOMEX® substrate laminated to a lightweight breathable, CROSSTECH® (Type 2C), Teflon membrane; weighing 3.75 oz./sq. yd.

THERMAL LINER MATERIAL: 3.5 oz./sq. yd. Glide™ (NOMEX® filament/spun) face cloth quilted to one layer E-89™ spunlace aramid 85%NOMEX®/15% KEVLAR® weighing approximately 2.3 oz./sq. yd. With a Teflon® finish. And one layer of apertured (11-13 apertures/sq. inch) E-89™ spunlace aramid 85% NOMEX®/15% KEVLAR® weighing approximately 1.5 oz./sq. yd. With a Teflon® finish. (Total weight +/- 7.3 oz./sq. yd.) .

STRESS POINTS: All outer shell stress points, including top and bottom pocket corners, pocket flap corners, top and bottom of storm flap/fly shall be reinforced using a 42 stitch minimum bar tack and reinforced with Polymer-Coated aramid.

SPECIFICATION



SIZES: Coats shall be made available in even chest sizes with corresponding sleeve lengths available in short, regular, and long. Pant sizes shall be made available in even waist sizes with inseam lengths available in extra short, short, regular and long. Male and female sizing available.

LABELING: Each garment shall have a garment label(s) permanently and conspicuously attached stating at least the following language, as well as detailed warning instructions provided by the manufacturer.

Do Not Remove This Label

THIS PROXIMITY FIREIGHTING PROTECTIVE GARMENT MEETS THE GARMENT REQUIREMENTS OF NFPA 1971, 2007 EDITION.

MADE IN THE U.S.A.

TRACKING LABEL SYSTEM: There shall be a PDF417, two dimensional bar code label permanently affixed to each garment for tracking purposes. The bar code shall contain a minimum of the following information:

- a. unique serial number
- b. item description (brand, model, material color)
- c. lot information (date of mfg., size, etc.)
- d. material description
- e. the standard to which the garment is compliant

The bar code shall be able to withstand customary wash and wear cycles. The PDF417 bar code must incorporate a minimum of a 30% "error correction" capability.

USER INFORMATION GUIDE: Each garment shall include a *User Information Guide* with information required by NFPA 1971. This guide shall include:

- (a) Pre-use information:
 - Safety considerations.
 - Limitations of use.
 - Garment marking recommendations and restrictions.
 - A statement that most performance properties of the garment cannot be tested by the user in the field.

SPECIFICATION



- Warranty information.

- (b) Preparation for use:
 - Sizing/adjustment.
 - Recommended storage practices

- (c) Inspection:
 - Inspection frequency and details.

- (d) Don/Doff:
 - Donning and doffing procedures.
 - Sizing and adjustment procedures.
 - Interface issues.

- (e) Use:
 - Proper use consistent with NFPA 1500, *Standard on Fire Department, Occupational Safety and Health Program*, and 29 CFR 1910, 132.

- (f) Maintenance and Cleaning:
 - Cleaning instructions and precautions with a statement advising users not to use garments that are not thoroughly cleaned and dried.
 - Inspection details.
 - Maintenance criteria and methods of repair where applicable.
 - Decontamination procedures for both chemical and biological contamination.

- (g) Retirement and disposal:
 - Retirement and disposal criteria and considerations.

- (h) Drag Rescue Device (DRD)
 - Use, inspection, maintenance, cleaning and retirement of the DRD.

WARRANTY: Each garment shall have a limited lifetime warranty against defects in material and workmanship which is detailed on a card attached to each garment.

SPECIFICATION



COAT CONSTRUCTION: The coat shall be designed of a 3-panel construction in all layers to provide a proper fit. When measured at the center of the back from the collar seam to the hem bottom, the coat shall measure 32" or 35" long (Female sizes 29" or 32" long). Sleeves shall be of full length and of shoulder insert, 2-panel type design.

MOISTURE BARRIER/THERMAL LINER CONSTRUCTION: Design shall be compatible with the outer shell so that the liner does not buckle, pull, or otherwise restrict body motion. The left and right fronts of the moisture barrier/thermal liner shall be attached to the facings at the front closure of the outer shell. The neck of the moisture barrier/thermal liner shall be secured to the neck of the outer shell collar such that when donning the coat an arm may not be accidentally caught between the outer shell and its inner linings along the neck between the armholes. Liner shall have a 2" wide, 2-ply CROSSTECH®/NOMEX® pajama check extension sewn the full length of the neck. FR loop, 3/4" wide, shall be sewn on extension to tuck into pleat in outer shell collar.

The liner shall have one 8.5" x 8.5" internal pocket which shall be made of black outer shell material. The liner pocket shall be located on the left side of coat liner.

Quilt Thermal Liner Construction: The moisture barrier shall be completely sewn to the thermal liner at its perimeter with the breathable membrane oriented inward toward the thermal liner and away from the outer shell. All moisture barrier seams shall be sealed as required by NFPA 1971. The moisture barrier/thermal liner shall finish no more than 1" from the cuffs and 3" from the hem.

MOISTURE BARRIER/THERMAL LINER ATTACHMENT: The moisture barrier/thermal liner shall be completely detachable from the outer shell for ease of cleaning by the use of hook and loop, zippers, and snaps. There shall be a brass zipper down each front facing, hook and loop along the neck to interface with collar as well as hook and loop and one snap at each sleeve end.

COAT LINER INSPECTION SYSTEM: There shall be an 11" opening located on the coat liner system at the center right front of the liner. This opening will provide the ability to completely invert the coat liner to properly view the integrity of the entire liner system. There shall be one piece 1" x 4" FR loop sewn to the back side of the liner system with a piece of 1.5" x 3" FR hook sewn to the inside of the outer shell to ensure proper alignment when installing the liner system into the outer shell. This Liner Inspection System is completely hidden when the liner is properly installed into the outer shell.

SPECIFICATION



COLLAR: The collar shall be of three piece contoured 4-layer configuration such that when the collar is raised it shall remain standing while providing continuous thermal and moisture protection around the neck and face. To ensure this protection, the two layers of outer shell collar shall be fully lined with one layer of Gore RT7100™ PTFE moisture barrier material and two layers of 1.5 oz. apertured E-89™ thermal liner. The collar shall provide proper interface with liner to insure no moisture penetration through the collar seam to inside of coat.

The collar shall be contoured and shall completely cover the neck and throat area when in the raised position. Raised height shall be approximately three inches (3”), with a contoured overlap at the front of the coat. Collar closure shall be provided by FR hook and loop 1.5” x 4”, with hook portion sewn on right side of collar, and loop portion sewn on left, set horizontal. Collar shall be of such design so as not to interfere with SCBA facemasks, nor helmet.

When examined prior to donning, the turned-up collar shall completely wrap around the front of the neck opening such that left and right collars touch or overlap to maximize facial protection.

The three piece contoured 4-layer collar shall be sewn with a pleat on the innermost layer. Pleat shall have 3/4" FR hook sewn on the underside to engage the moisture barrier extension on the liner.

HANGER LOOP: An external hanger loop, constructed of a double layer of outer shell material and reinforced with two 42-stitch bartacks shall be provided on the outside of the coat at the collar seam. It shall be designed to provide long service and shall not tear or separate from the coat when the coat is hung by the hanger loop, loaded evenly with a weight of 80 lbs. and allowed to hang for one minute.

DRAG RESCUE DEVICE (DRD): The Fire Fighter Recovery Harness™ shall be constructed of a one and one-half inch (1 ½”) wide KEVLAR® strap that shall be installed between the outer shell and the thermal liner. This harness shall have a hand loop (16” in circumference) that exits the outer shell through a 2” polymer coated aramid reinforced slot on the back of the coat just below the collar and is held in place by means of a piece of 1.5” x 2” hook on the strap and a piece of 1” x 2” loop attached to the outer shell. This strap is then secured under a 2” x 5.25” flap that is sewn in at the neck /collar area. Two pieces 1” x 2” loop shall be set vertically on shell to align with two pieces of 1” x 2” hook set vertically to the underside of the flap. The harness is also held in proper alignment by means of a 2” x 2” piece of loop placed on the inside of the outer shell just above the chest trim that corresponds to a piece of 1.5”x 2” hook located on the harness. Two 1” x 3.5” self-fabric straps with 1” x 2” hook on one end and 1” x 2” loop on other end shall be set to coat in the shoulder cap area to keep straps in proper position for use.

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Fire Fighter Recovery Harness™ provides mechanical leverage for dragging a downed and incapacitated structural firefighter from a life-threatening environment. The design of the harness enables the rescuer to drag the downed firefighter in line with the axis of the firefighter's skeletal frame, in order to decrease the risk of further injury.

THERMAL REINFORCED YOKE: An additional layer of Semper Dri™ (3.5 oz./sq. yd. Glide™ (NOMEX® filament/spun) face cloth quilted to one layer E-89™ spunlace aramid 85%NOMEX®/15% KEVLAR® weighing approximately 2.3 oz./sq. yd. with a Teflon® finish, and one layer of apertured (11-13 apertures/sq. inch) E-89™ spunlace aramid 85% NOMEX®/15% KEVLAR® weighing approximately 1.5 oz./sq. yd. with a Teflon® finish (total weight +/- 7.3 oz./sq. yd.) shall be positioned between the moisture barrier and thermal liner for extra thermal protection in a high heat and compression area of the coat. It shall be sewn to the inside of the upper back portion of the thermal liner across the upper back from the back shoulder and collar seams 7" down, over the tops of shoulders and down the front approximately 4" and across the back ending at the armhole.

SHOULDER CAPS: A 4" wide area at the top of the shoulders extending 6" from the collar seam shall be capped with outer shell material for abrasion resistance and thermal protection.

BELLOWS UNDERARMS: Bellows underarm construction shall be used in all layers of the coat-outer shell/moisture barrier/thermal liner-ensuring maximum upper body freedom of movement including complete arm mobility when reaching up and/or forward. Bellows construction shall extend to all inner layers of the coat making it possible for the fit and freedom of movement, derived from the outer shell bellows construction, to be passed through the inner layers to the wearer's body.

The outer shell/moisture barrier/thermal liner bellows shoulder construction shall consist of an underarm and shoulder bellows of elongated football shape not less than 8" wide by not less than 15" long sewn into each of the coats fabric layers by two-needle construction. The bellows in each layer shall begin at a point corresponding to the front of the armpit, wrap around under the arm and shoulder joint, and terminate at the rear top of the shoulder.

FREEDOM® ELBOW: The sleeve shall have an insert throughout all layers, which shall provide a natural bend in the sleeve. This insert shall be set in the back of each sleeve and shall be a shortened football shape, 6" wide in the middle and 3" wide at the seams. The outer shell insert shall consist of outer shell material for abrasion resistance and thermal protection.

SPECIFICATION



SLEEVE WELL/WRISTLET MOUNTING: A combination of Semper Dri™ (3.5 oz./sq. yd. Glide™ (NOMEX® filament/spun) face cloth quilted to one layer E-89™ spunlace aramid 85%NOMEX®/15% KEVLAR® weighing approximately 2.3 oz./sq. yd. with a Teflon® finish, and one layer of apertured (11-13 apertures/sq. inch) E-89™ spunlace aramid 85% NOMEX®/15% KEVLAR® weighing approximately 1.5 oz./sq. yd. with a Teflon® finish (total weight +/- 7.3 oz./sq. yd.)/ breathable CROSSTECH® (Type 2C) moisture barrier leader shall be sewn no more than 1" back from the combination liner sleeve end to form a sleeve well. One male snap and one .75" wide strip of FR loop shall be sewn full circumference to the end of the thermal liner/CROSSTECH® (Type2C) moisture barrier leader to help secure the combination liner to the outer shell. This sleeve well shall prevent water and hazardous materials from entering the sleeve when arms are in a raised position.

The combination liner sleeve ends shall be inserted into the outer shell sleeve ends by means of lining up the male snap then attaching the FR loop fastener of the combination liner sleeve end with the female snap and FR hook fastener of the outer shell cuff. This method of combination liner attachment shall prevent any gaps from occurring between the combination liner and sleeve well during a full range of motion. The combination liner shall extend to within 1" of the sleeve end.

WRISTLETS: An internal wristlet shall consist of a 2-ply knit of 48% NOMEX®/48% KEVLAR® and 4% Spandex for superior recovery. Wristlet to be combination of natural and bronze pigment dyed by DuPont, and with extremely durable Teflon® water resistant alloy not less than 8" extending completely over the palm with a thumbhole preventing the wristlet from sliding back. Wristlets shall be double stitched and bound to the moisture barrier/thermal liner providing extended thermal and slash protection.

CUFFS: The cuff of the sleeve shall be reinforced with a binding of outer shell material not less than 3" in total width for abrasion resistance and thermal protection. At least 2" of the cuff reinforcement shall extend down the interior of the outer shell sleeve with a .75" wide strip of FR hook sewn full circumference to the topside of the cuff reinforcement. For added safety, one female snap fastener shall be set in the hook fastener to assist in attaching outer shell to moisture barrier/thermal liner.

THERMAL FRONT PANEL CONSTRUCTION: There shall be continuous thermal and moisture protection around the entire torso including the storm flap. To ensure this protection, as well as reduce potential for wicking

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moisture to inside of liner, both right and left inside front facings of the coat outer shell shall incorporate outer shell fabric and Gore RT7100™ PTFE moisture barrier, extending from collar to hem.

COAT FRONT CLOSURE DESIGN: The complete outer shell coat front closure design shall consist of a FRONT CLOSURE SYSTEM completely protected by an OUTSIDE STORM FLAP which shall have its own, independent STORM FLAP CLOSURE SYSTEM.

STORM FLAP: A storm flap measuring not less than 3" wide, nor less than 22" in length shall be set on the outside of the right side of the coat opening for maximum thermal protection and clear drainage. The inner lining of the storm flap shall be Gore RT7100™ PTFE moisture barrier meeting all requirements for moisture barriers sandwiched between two layers of outer shell fabric.

FRONT/STORM FLAP CLOSURES: The front closure shall consist of four snap hooks shall be set with three leather reinforced rivets at the extreme right side of the coat front underneath the storm flap. Opposite of each snap hook, a corresponding dee ring set to the underside of the leading edge of the left coat front with two leather reinforced rivets. Three glove snaps shall be placed between the inside hook and dee rings to assure proper closure. The storm flap closure shall consist of 2" wide loop on the inner side of the storm flap and 2" wide hook attachment on the left coat front. The hook and loop closure shall extend the full length of the outer storm flap eliminating all exposed frontal hardware.

HANDWARMER POCKET (2): There shall be 9" x 9" Semi-bellow handwarmer pocket that expands by means of side and bottom gussets to a thickness of 1.5" in front only and 0" in back. The pocket shall be set at the bottom of the coat hem, (1) each side, and reflective trim shall be set on each pocket.

Pocket shall be fully lined inside with Arafil thermal liner material.

Pocket and flap shall be set with stitch 301, seam Ssb-2 with each corner of pocket opening and top corners of flap reinforced with bar tacks for additional strength. Drainage of moisture to be provided by brass eyelets.

Each pocket shall have a 7.5" diagonal opening cut at the upper rear with corresponding diagonal pocket flaps providing full closure. Each pocket flap shall measure 3.5" x 8.5".

A hook and loop fastener closure system shall be set with 1.5" x 2.75" loop fastener set horizontally on the outside edge of the pocket opening with corresponding 1.5" x 2.75" hook fastener set vertically on the underside of the flap.

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RADIO POCKET: There shall be a 3.5" wide x 9" deep full bellows radio pocket that expands by means of side and front gussets to a thickness of 2" in front and back set to the left chest.

Pocket and flap shall be set with stitch 301, seam Ssb-2 with the top and bottom pocket corners and top corners of flap reinforced with a minimum 42-stitch bar tack. A brass eyelet shall provide drainage of moisture.

Pocket flaps shall be 4.5"x 5".

Pocket shall be fully lined all 3 sides inside pocket with polycotton lining.

Pocket flap shall close to the pocket top using 1 piece of 1"x 2" loop on pocket horizontally and 1 piece of 1"x 2" hook on flap vertically.

Pocket flap shall include a notch positioned on either side of the flap to accommodate an antenna.

MIC TAB (2): There shall be a 1"x3" self-fabric mic tab bartacked on each end and set as follows: (1) left chest above radio pocket; (1) Left Chest 4" above Radio Pocket, (1) Right Chest 1" below Utility Snap Hook. Bar tacks shall be a minimum 42-stitch bar tack.

UTILITY SNAP HOOK: There shall be a utility snap hook securely riveted with (3) leather reinforced rivets and located on the right chest 1" above the mic tab.

PANT CONSTRUCTION: The pant shall be no more than 1" higher in the front than a standard bunker pant with a gradual increase to 2" higher than a standard bunker pant in the rear.

MOISTURE BARRIER/THERMAL LINER CONSTRUCTION: Design shall be compatible with the outer shell so that the liner does not buckle, pull, or otherwise restrict body motion. The bottom nine inches of each thermal leg shall be constructed of Semper Dri™ (3.5 oz./sq. yd. Glide™ (NOMEX® filament/spun) face cloth quilted to one layer E-89™ spunlace aramid 85%NOMEX®/15% KEVLAR® weighing approximately 2.3 oz./sq. yd. with a Teflon® finish, and one layer of apertured (11-13 apertures/sq. inch) E-89™ spunlace aramid 85% NOMEX®/15% KEVLAR® weighing approximately 1.5 oz./sq. yd. with a Teflon® finish (total weight +/- 7.3 oz./sq. yd.) to deter the wicking of moisture up the thermal liner leg. The waist of the moisture barrier/thermal liner shall be secured to the waist of the outer shell such that when donning the pant a leg may not be

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accidentally caught between the outer shell and its inner linings along the waist and between the legs of the pant. For added thermal protection in the knee, an additional layer of 1/8" thick, fire retardant closed-cell foam shall be positioned between the thermal liner and moisture barrier.

Quilt Thermal Liner Construction: The moisture barrier shall be completely sewn to the thermal liner at its perimeter with the breathable membrane oriented inward toward the thermal liner and away from the outer shell. The moisture barrier/thermal liner shall finish no more than 3" from the cuffs.

MOISTURE BARRIER/THERMAL LINER ATTACHMENT: The moisture barrier/thermal liner shall be completely detachable from the outer shell for ease of cleaning by using snaps. Eight evenly spaced snaps shall secure the liner to the integral waistband; two snaps shall be set in leather leg tabs at each leg end.

PANT LINER INSPECTION SYSTEM: There shall be an opening located on the pant liner system to the right side of the waist separating the thermal barrier and moisture barrier, approximately 10" in length. This opening will provide the ability to completely invert the pant liner to properly view the integrity of the entire liner system. There shall be a piece of 1" x 3" FR loop sewn to the moisture barrier 3" over from beginning of opening and a corresponding piece of 1" x 3" FR hook sewn to the inside of the outer shell to ensure proper alignment when installing the liner system into the outer shell. This Liner Inspection System is completely hidden when the liner is properly installed into the outer shell.

STORM FLY/CLOSURE: The outer shell shall have an overlapping fly front running the full length of the fly on the left side. The flap shall not be less than 2.5" wide at the waistband. The bottom of the fly shall be reinforced with one 42-stitch bartack.

The storm fly shall be held closed along its length by means of a hook and loop fastener closure 1.5" minimum width, along the leading edge for a distance of not less than 6" from the bottom of the fly closure to the waist area for proper alignment and secure closure. A hook and dee ring closure shall be used for quick one motion closing at the waist. The hook shall be 2.5" in length, made of a zinc non-ferrous metal alloy and weigh 1.2 oz. +5%. It shall be securely fastened to the pant by means of a 5/8" wide, treated leather take-up strap looped through the rear of the buckle and triple riveted to the pant shell with leather backed rivets. The back leather-belted strap shall fasten through a buckle of 5/8" x 2" leather strap attached with 2 rivets. The dee shall be made of a non-ferrous metal alloy 2" long x 1 1/16" wide.

THERMAL FLY ASSEMBLY: The moisture barrier/thermal liner shall be constructed with an extension on the left side at the waist of all layers of the fly opening to assure continuous thermal and moisture protection. This

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overlap shall be positioned between the layers of the outside storm fly. A 1" wide x 9" long hook fastener shall be sewn to the moisture barrier/thermal liner to engage corresponding loop fastener on the underside of the outside storm fly.

At the bottom of the fly opening, this overlap shall be further secured by means of a bar tack to prevent gapping at the base of the moisture barrier/thermal liner fly when the wearer is kneeling/crawling. This bar tack shall also serve to reinforce the front end of the seat seam if stretched or stressed.

WAISTBAND: The waist of the pants shall be reinforced on the inside with two-ply of outer shell fabric material not less than 1.5" in width. The pant waist shall be turned under to provide double material strength with the independent waistband, which shall then be double stitched to the outer shell.

Eight suspender buttons shall be appropriately spaced around the waistband to accommodate the use of suspenders.

EXTERNAL TAKE-UPS: There shall be two waist straps sewn and bar tacked 2 ½" down from the top of the waistband. One strap shall be installed on the right side and one on the left side constructed out of one piece of shell material folded to two layers and sewn to form a 1/2" wide strap. Each strap shall be a minimum of 8 ½" in length. These take-up straps shall have a 5/8" nickel plated postman style slide buckle which shall be attached by a piece of shell material six (6) inches in length folded to form two layers. The strap is sewn to form an attachment strap approximately three (3) inches in length designed for quick take-up adjustment.

SEAT REINFORCEMENT: A ten inch wide strip of 4.5 oz. NOMEX® fabric completely encompasses the inside of the shell at the seat and the crotch for additional reinforcement.

RADIAL INSEAM BAND: The pant inseam shall incorporate a comfort/mobility design in all layers. This design shall eliminate crotch seams, providing for a more comfortable fit while decreasing bunching of materials. Mobility shall be gained through this design by increasing leg circumference. This design shall reduce restriction of leg movement.

The banded pant insert shall run continuously from the top of the mobile knee of one leg, through the crotch, to the top of the mobile knee of the opposite leg.

FREEDOM® KNEE: The knee shall incorporate a comfort/mobility design in all layers. This design shall allow for a natural bending motion of the knee. The knee shall be outer shell material and measure 9" across the bottom,

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not less than 7" on the sides and gradually increase to 12" at the center point at the apex. The apex of the knee shall allow for not less than a 1.5" bellows at the center. The radial seam shall provide a gusset that the knee can fall into when crawling, climbing, bending, kneeling, etc. The bottom of the mobile knee shall be placed not less than 10" from the cuff to fall anatomically correct.

CUFFS: The cuff area of the pant shall be reinforced with a binding of outer shell material not less than 2" in total width for greater strength, abrasion resistance, and thermal protection.

FULL BELLOWS POCKET (2): There shall be 10" wide x 10" deep outside full bellows pockets that expand by means of side and bottom gussets to a thickness of 2" in front and back, and set (1) to each thigh.

Pocket shall be fully lined on three sides with KEVLAR® twill on inside of pocket.

Pocket and flap shall be set with stitch 301, seam Ssb-2 with the top and bottom pocket corners and top corners of flap reinforced with bar tacks for additional strength. Drainage of moisture to be provided by brass eyelets.

Pocket flap shall be 11"x 5.

A hook and loop fastener closure system shall be set with 1.5" x 10" loop fastener horizontally on the pocket and (2) pieces of 1.5" x 2.75" hook fastener vertically on the underside of the flap.

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HEAVY-DUTY ELASTIC SUSPENDERS

SCOPE

A highly engineered traditional styled 43" red suspender allowing for eight points of attachment to a traditional or contoured waist bunker pant with traditional suspender buttons.

DESIGN

Two **27" shoulder straps** shall be constructed as follows: 2" wide elastic polyester webbing shall be fed through the top half of a **steel double dee ring** and secured with a two-needle lock-stitch. Shoulder straps shall be adjustable using steel slide adjusters allowing the user to vary the length of the suspenders for proper fit. Four points of attachment shall be constructed of 5.5 oz/sq. ft. vegetable tanned leather which is die-cut into four straps riveted to a 1" piece of leather fed through the bottom half of the steel double dee ring. The four straps shall have buttonhole loops which allow for a secure fit around suspenders buttons and will not easily disconnect when in use. Leather loops shall be configured such that they rotate around the suspenders buttons allowing for freedom of motion.

A **triangular leather back junction** constructed of one layer of 5.5 oz/sq. ft. vegetable tanned leather and one layer of chromed, tanned, split leather shall be used to join the two shoulder straps to four back straps.

Four **11" back straps** made of 2" wide elastic webbing shall be joined with a 2" overlap at the end of each shoulder strap beneath the triangular leather back junction. The ends of each back strap shall be secured to 5.5 oz/sq. ft. vegetable tanned leather which is die-cut into four buttonhole loops allowing for a secure fit around suspenders buttons and will not easily disconnect when in use. Leather loops shall be configured such that they rotate around the suspenders buttons allowing for freedom of motion.

LIFETIME WARRANTY

All products shall be warranted against defects in materials and workmanship for the useful life of the product.

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FIREWALL® ARFF GLOVES

Design & Construction:

Glove shall be a gunn cut pattern with wing thumb construction. Front, back and all sides of the glove and fingers are of Aluminized PBI/Kevlar Knit and have grip patches on palm, thumb and all fingers. Back of the glove shall be oversized with expandable vent pleat, allowing for more room and insulative air across back of hand. Glove body shall extend 1½” circumferentially beyond the wrist crease. Glove liner or liner/barrier system shall be permanently sewn in at fingertips. No glue shall be used to attach liner/barrier system inside glove.

Specifications:

Outer Shell: 7 oz. Aluminized PBI/Kevlar Knit .025 in. thick (.063 cm) Flexible Vent Pleat on Back of Hand

Protective Barrier: CROSSTECH Direct Grip one piece Liner/Barrier System

Palm Side Grip Patches: 3-3.5 oz. Black FR Split Cowhide Grip Patches on Palm Side

Steamblocker: Firewall Steamblock } Insulative pad shall be a fire retardant silicone foam elastomer with an integral skin on the top and bottom surfaces and be attached in the side seams of the glove. The Firewall Steamblock } Insulative pad shall extend on the back of the glove from the bottom/wrist of the glove to approximately ¼” below the crotch of the fingers.

Wristlet: Nomex® 10.5 oz per yard, Double ply, 4” Wristlet

Wrist Pull: 3” x 3 ½” Round Leather Pull, Sewn to Wristlet & Glove Body

Thread: Sewn with High burst Strength Kevlar 30/5 Lock stitch, 8-10 Stitches per Inch

Label: Compliant to NFPA 1976, 2000 edition

Origin: Made in U.S.A.

Sizes:

Generously sized: M, L, XL