

BID SOLICITATION



City of Chattanooga
 101 East 11th Street, Suite G13
 Chattanooga, TN 37402

BID OPENING DATE AND TIME:
 09-AUG-18 at 2:00 PM

BID NUMBER: 305181

BUYER:
PHONE #: (423) 643-7230
DELIVERY REQUIRED:

SEALED BIDS

Mail or submit two (2) signed copies of bid form to this office in the enclosed envelope. Retain one copy for your file.

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Item	Class-Item	Quantity	Unit	Unit Price	Total
Requisition No: 170394 Ordering Dept: Fire Department Buyer: William Tucker Fax: 423-643-7244 Email: wtucker@chattanooga.gov *****					
Items Being Purchased: Fire Fighters' Protective Clothing *****					
ATTACHMENTS: Specifications (17 pages) Instructions to Bidders (3 pages) *****					
BIDS MUST BE RECEIVED NO LATER THAN ** *** 02:00 PM EST on AUGUST 9, 2018 *** **					
SEALED BID: All Bids must be delivered to the Purchasing Office in a sealed envelope on or before the time and date specified above. DO NOT email or fax your Bid; such Bids cannot be considered. *****					
This shall be a twelve-month blanket contract to supply : Fire Fighters' Protective Clothing as needed by agencies of the City of Chattanooga. The contract terms may be renewed for two (2) additional twelve (12)-month terms under the same terms and conditions by mutual agreement. The City of Chattanooga and the Contractor may extend the contract by providing written confirmation of agreement by both parties at least 30 days prior to the contract's current expiration date. *****					
Items being purchased are to be delivered to: Fire Administration 910 Wisdom Street Chattanooga, TN 37406 Delivery Contact: Vanessa Meyer, Tel. 423-643-5688 *****					
ALL ITEMS MUST BE QUOTED F.O.B DESTINATION *****					
The City of Chattanooga Standard Terms and Conditions are incorporated herein by reference, and are available for review on the City's website at http://www.chattanooga.gov/purchasing/standard-terms-and-conditions . If you cannot access the document online, contact the Purchasing Office for a copy. *****					
NOTE: ALL BIDS MUST BE SIGNED All bids received are subject to the terms and conditions contained herein and as listed in the above-referenced website. By submission of a Bid, the bidder acknowledges having reviewed the Standard Terms and Conditions, and agrees to be bound by such terms. *****					
NO SUBSTITUTIONS OR EQUIVALENTS WILL BE ACCEPTED. *****					
The City of Chattanooga reserves the right to reject any and/or all					

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Item	Class-Item	Quantity	Unit	Unit Price	Total
<p>Bids, waive any informalities in the Bids received, and to accept any Bid which in its opinion may be for the best interest of the City.</p> <p>The City of Chattanooga will be non-discriminatory in the purchase of all goods and services on the basis of race, color, or national origin. *****</p> <p>Vendor Contact Information:</p> <p>Vendor Name _____</p> <p>Contact Person _____</p> <p>Tel.: _____</p> <p>Fax: _____</p> <p>Email: _____</p> <p>Mailing Address: _____</p> <p>City, State, Zip: _____ *****</p>					

NOTE: ALL BIDS RECEIVED ARE SUBJECT TO THE TERMS AND CONDITIONS

The City is Exempt from all Federal and State Tax.
 Bids will be received at the above mentioned address.

TERMS OF PAYMENT: _____

TELEPHONE NUMBER: _____

ALL BIDS MUST BE SIGNED – The undersigned offers the above quoted prices under the conditions contained herein.

COMPANY: _____

SIGNATURE: _____

NAME AND TITLE: _____

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City of Chattanooga
 101 East 11th Street, Suite G13
 Chattanooga, TN 37402

Item	Class-Item	Quantity	Unit	Unit Price	Total
1	Protective coats, per attached specs. Janesville Gear, No substitutions.	390	Each	_____	_____
2	Protective pants, per attached specs. Janesville Gear, No Substitutions.	390	Each	_____	_____
3	Protective suspenders, per attached specs. Janesville Gear, No Substitutions.	390	Each	_____	_____
4	Protective clothing, optional lettering, per fire fighter's last name on hanging patch, per attached specs. Janesville Gear, No Substitutions.	30	Each	_____	_____

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SIGNATURE: _____

NAME AND TITLE: _____

Instructions to Bidders

(1) Bid documents can be downloaded from the City's website at www.chattanooga.gov. At the left side of that page is a link labeled "Bid Solicitations." Click that link, and a page will open with a list of the City's current Bid Solicitations, with links that will display a PDF version of the bid documents suitable for printing.

(2) Any Addenda will be published in the list of Bid Solicitations mentioned above. Bidders should check this list before submitting their bids, to see whether any Addendum has been issued.

(3) Bid documents should be submitted to the following address:

Purchasing Office, Suite G-13
City Hall
101 East 11th Street
Chattanooga, TN 37401

(4) Sealed Bids should be submitted in a sealed envelope. No particular envelope is required, but the Bid Solicitation number should be marked on the outside of the envelope. This is a six-digit number starting with a "3".

(5) Any questions regarding the specifications or bidding process should be directed to the Buyer, preferably by email, to the following address: wtucker@chattanooga.gov.

The Buyer will, if possible find answers to the submitted questions and will issue an Addendum so that all potential bidders will have access to the answers.

(6) Tennessee law prohibits municipalities from contracting with business entities which engage in investment activities in Iran. A list of such prohibited entities can be viewed at

https://www.tn.gov/content/dam/tn/generalservices/documents/cpo/cpo-library/public-information-library/List_of_persons_pursuant_to_Tenn._Code_Ann._12-12106_Iran_Divestment_Act_updated_7.7.17.pdf

A form entitled "Vendor Disclosure and Acknowledgement" is attached, which asks the Bidder to affirm that it is not on the list of prohibited entities. This form should be completed and submitted with your Bid.

(7) A Form titled "No Contact/No Advocacy" is attached, regarding contact with City representatives during the evaluation of Bids. Bidders are required to submit this completed Form with their Bids.

Chapter No. 817 (HB0261/SB0377). "Iran Divestment Act" enacted.
Vendor Disclosure and Acknowledgement

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to § 12-12-106.

(SIGNED) _____

(PRINTED NAME) _____

(BUSINESS NAME) _____

(DATE) _____

No Contact/No Advocacy

Notice Receipt

City of Chattanooga
Purchasing Division

For Submission with Sealed Bid Solicitation Responses:

_____ (Vendor Agent name), states that:

(1) He/She is the owner, partner, officer, representative, or agent of _____

_____ (Business name), the Submitter of the

attached sealed solicitation response to Solicitation # _____, and said

Business has taken notice, and will abide by the following No Contact and No Advocacy clauses:

NO CONTACT POLICY: After the posting of this solicitation, a potential submitter is prohibited from directly or indirectly contacting any City of Chattanooga representative concerning the subject matter of this solicitation, unless such contact is made with the Purchasing Division.

NO ADVOCATING POLICY: To ensure the integrity of the review and evaluation process, companies and/or individuals submitting sealed solicitation responses, as well as those persons and/or companies formally/informally representing such submitters, may not directly or indirectly lobby or advocate to any City of Chattanooga representative.

Any business entity and/or individual that does not comply with the No Contact and No Advocating policies may be subject to the rejection or disqualification of its solicitation response from consideration.

Submitter Signature:

Printed Name:

Title: _____

Date: _____

Personal Protective Equipment

Technical Specification

Prepared On:

Oct 25, 2017

On Behalf of:

Chattanooga Fire Dept.

Chattanooga

TN

Protective Clothing Specification

Meets Requirements?

Scope

Yes | No

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.

Standard

Yes | No

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 AND PROXIMITY FIRE FIGHTING, FED-OSHA CFR 1910, Subpart L, OSHA 29 CFR Part 1910.1030 and/or the requirements of CAL-OSHA title 8, Article 10.1, Para. 3406.

All components and composites used in the construction of garments shall be third party tested, certified and listed for compliance to NFPA 1971. The label of the third party tester shall denote certification.

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

USER GUIDE INFORMATION

Yes | No

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.

Tracking Label System

Yes | No

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.

Sizes

Yes | No

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.

Warranty

Yes | No

Each garment shall have a limited lifetime warranty against defects in material and workmanship.

Composite Performance

Yes | No

The garment composite, consisting of the outer shell, moisture barrier and thermal liner, shall provide a Thermal Protective Performance (TPP) of not less than 40 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 261 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 25 seconds for the knee when measured at 8 psi.

Stress Points

Yes | No

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.

Labeling

Yes | No

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 GARMENT MEETS THE GARMENT REQUIREMENTS OF NFPA 1971,
STANDARD ON PROTECTIVE ENSEMBLE FOR STRUCTURAL FIRE FIGHTING,
2013 EDITION**

MADE IN THE U.S.A.

Packaging

Each Coat and Pant shall be packaged in a dark plastic bag in order to provide protection during shipping and prior to first use

LION Fire Academy

Online training shall be available meeting NFPA 1500 training requirements on the safe use of the (garments, helmet, boots, gloves, hood). This online training shall include:

- Personal Responsibility of the Individual Fire
- Purpose and Limitations
- Structural PPE Construction, Features, and Functions
- Routine Inspection
- Donning and Doffing
- Proper Fit and Overlap
- Using Your PPE Safely
- How Fire Fighting Affects the
- Routine Cleaning of PPE
- Assembly and Disassembly of PPE
- Storage
- Useful Life and Retirement of PPE

Additionally online training satisfying NFPA 1851 training requirements on advanced inspection, advanced cleaning and basic repairs (turnouts and helmets) shall be available.

Acquisition Regulation

In the past seven-year period has your firm, or any of its principals, been convicted or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property?

YES NO

Detailed Description / Specification

Meets Requirements?

LION V-Force® Bi-Swing Coat

Coat Model / Design

Yes | No

COAT CONSTRUCTION: The coat is designed of a 3-panel construction in all layers of our innovative V-fit design. For optimum comfort and mobility an inverted pleat on each side where back front and back body panel pieces meet shall be incorporated. Each pleat shall begin at the back of each shoulder and shall extend vertically down the side of the coat. A combination moisture barrier/thermal liner shall include a corresponding 1" inward dynamic fold approximately 1.5" from each sleeve seam at the shoulder. This fold shall provide for coat expansion when extending arms forward and shall interface

Detailed Description / Specification

Meets Requirements?

with the inverted pleats of the outer shell to maximize mobility and function of the outer shell and thermal liner. Sleeves shall be of raglan design in the front and set in design in back.

Coat Model / Design

Yes | No

When measured at the center of the back from the collar seam to the hem bottom, the coat shall measure 29", 30.5", 32", 33.5", or 35" long for male; 29" or 32" long for female.

Drag Rescue Device

Yes | No

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. The loop handle shall have a silver retro-reflective LION logo patch.

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.

Reflective Trim

Yes | No

Reflective Trim set vertical down flap of fallen man harness, 4 rows lockstitch.

Trim shall be of 3" Ventilated Scotchlite II (triple trim) of lime/yellow

Ventilated Trim shall be of 3" Scotchlite II (triple trim) of lime/yellow perforated with 0.08 mm holes (114 per square inch) to provide a conduit for the release of vapor that can occur when moisture is heated and the trim compressed.

Coat Outer Shell Material

Yes | No

The outer shell shall be constructed of +/- 6.0 oz./sq. yd. 70% "PBI Dominant" PBI®/KEVLAR® spun yarns/30% 600 denier KEVLAR® filament in a twill weave with extremely durable FPE water resistant Teflon® FPE alloy finish. Color shall be natural (gold).

Coat Liner & Moisture Barrier

Yes | No

THERMAL LINER: The thermal liner shall be comprised of Glide Ice™ high-lubricity, stress reducing, filament/spun face cloth weighing 3.6 oz/sq/yd. The Kevlar Nomex filament yarns shall represent no less than 60% of the face cloth's composition and shall be positioned in the warp direction of the weave in order to optimize their slippery characteristics on the face. Spun yarns comprised of 30% Nomex and 10% Lenzing FR spun yarns with superior wicking characteristics shall be used to promote moisture

management within the garment. The Glide Ice™ face cloth shall be quilted to one layer spunlace aramid (85%NOMEX®/15% KEVLAR®) weighing approximately 2.3 oz./sq. yd. and one layer of apertured (11-13 apertures/sq. inch) spunlace aramid (85% NOMEX®/15% KEVLAR®) weighing approximately 1.5 oz./sq. yd. both layers shall be treated with a Teflon® finish to promote minimal moisture storage in the garment as well as promote rapid drying (Total weight +/- 7.3 oz./sq. yd.).

MOISTURE BARRIER: CROSSTECH® BLACK (Type 2F): NOMEX® substrate laminated to a lightweight breathable, Teflon membrane; weighing 4.7 oz./sq. yd.

The liner shall have one 8.5" x 9" 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 two-piece 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 2" from the hem.

The vented moisture barrier features a circumferential opening at the torso mid section with a two-inch overlap and bartack reinforcement. Venting the moisture barrier allows increased heatloss performance while maintaining protection.

MOISTURE BARRIER/THERMAL LINER ATTACHMENT: Completely Removable: 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 zipper and two snaps down each front facing, hook and loop shall also be located around the entire neck opening. In addition, there will be a snap for alignment along the bottom of the liner, and one snap and hook and loop at each sleeve end.

All moisture barrier seams shall be sealed as required by NFPA 1971.

Coat Shell Attachment

Yes | No

There shall be a 1" x 2" self fabric strap with one end sewn to the coat shell & opposite end loose with one female non-logo snap. One male snap shall be centered on the liner at the bottom rear panel to align with the female snap.

Reflective Trim

Yes | No

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

Ventilated Trim shall be of 3" Scotchlite II (triple trim) of lime/yellow perforated with 0.08 mm holes (114 per square inch) to provide a conduit for the release of vapor that can occur when moisture is heated and the trim compressed.

Coat trim shall be applied as follows: New York Pattern: 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 approximately 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.

Coat Collar

Yes | No

MOISTURE BARRIER/THERMAL LINER CONSTRUCTION: The liner collar shall be a layer of self material and a layer of CROSSTECH® Black. The 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 liner collar shall be attached to the facings at the front closure of the outer shell. The neck of the liner collar 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. A 4" wide CROSSTECH® Black and 1.75" self-material extension shall be sewn the full length of the neck with two pieces of 1" loop for attachment to shell collar. The self material extension shall overlap the shell collar to prevent exposure of the hook and loop. Collar closure shall be provided by 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: The 3" split collar shall consist of two piece construction shaped for comfort. The collar shall be configured 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 a layer of CROSSTECH® Black. The shell collar shall provide proper interface with the liner to insure no moisture penetration through the collar seam to the inside of coat. The shell collar shall have two pieces 1" hook along top edge for liner attachment. The collar shall be attached to the liner facing using 1" hook. Collar shall be of such design so as not to interfere with SCBA face masks, or helmet.

Snap Attachment

Yes | No

There shall be four male snaps set in the hook&loop on the shell collar. One snap shall be set 3" left and 3" right of the center of the collar. One snap shall be set 6" over from the first snap on both sides. The snaps shall be set in between the fabric so the snaps do not show.

Hanger Loop

Yes | No

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.

Coat Inner Yoke Reinforcement

Yes | No

A layer of Semper Dri™ (3.0 oz./sq. yd. Teflon® treated Chambray (NOMEX® spun) face cloth quilted to two layers of NOMEX®/Kevlar® spunlace (Total weight +/- 6.0-6.8 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" ending at the armhole.

Coat Shoulder Reinforcement

Yes | No

A 4" wide area at the top of the shoulders extending 6" from the collar seam shall be capped with outershell material for abrasion resistance and thermal protection. For additional thermal protection and cushioning, one layer of uninterrupted 1/8" thick, fire retardant closed-cell foam shall be oriented between the outer shell and the shoulder cap reinforcement.

Coat Elbow Reinforcement

Yes | No

The sleeve shall have an insert throughout all layers that shall provide a natural bend in the sleeve. This elbow shall include cut outs, shaped pieces, and darts to create free movement with few restrictions. The insert shall consist of black polymer coated aramid for abrasion resistance and thermal protection.

In addition to reinforcement, elbows shall be padded using one layer of uninterrupted 1/8" thick, fire retardant closed-cell foam. The reinforcement material shall be oriented between the outer shell and elbow insert reinforcement.

Coat Cuff Reinforcement

Yes | No

The extended 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. One leather tab with female snap fastener shall be set in the cuff to attach outer shell to liner.

Coat Wristlets

Yes | No

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 colors producer 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.

Coat Water Well

Yes | No

A combination Chambray face cloth quilted to two layers of AraFlo E89 and one layer of breathable CROSSTECH® Black (Type 2F) moisture barrier leader shall be sewn no more than 1" back from the combination liner sleeve end to form a sleeve well. A 3/4" wide strip of loop fastener shall be sewn full circumference to the end of the thermal liner leader to help secure the combination liner to the outer shell. A CROSSTECH® Black (Type 2F) moisture barrier leader shall be sewn no more than 1" back from the combination liner sleeve end. This leader shall be approximately 4" in length and end with a gathering of 1" elastic. 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 snaps then attaching the loop fastener of the combination liner sleeve end with the hook fastener on the outer shell sleeve. 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.

Coat Closure System

Yes | No

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 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 2.5" 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 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 a thermoplastic zipper with a 1 3/4" polymer coated aramid tab added to left bottom for fast closure and exit. There shall be four standard snap hooks, each securely riveted with three leather reinforced rivets to the left front coat, to engage dee rings on the storm flap. Dee rings shall each be securely riveted with two leather reinforced rivets, along the leading outside edge of the storm flap. The snap hooks and dee rings shall be spaced with the first hook at the top of the coat and the other three snap hooks and dee rings evenly spaced along the front of the coat.

Coat Outer Yoke Reinforcement

Yes | No

A layer of Semper Dri™ (3.0 oz./sq. yd. Teflon® treated Chambray (NOMEX® spun) face cloth quilted to NOMEX®/Kevlar® spunlace (Total weight +/- 6.0-6.8 oz./sq. yd)) shall be sewn to the inside of the outer shell upper back portion and sleeve 8" in length and 12" across the sleeve.

Liner Inspection System

Yes | No

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" loop sewn to the back side of the liner system with a piece of 1.5" x 3" 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.

Detailed Description / Specification	Meets Requirements?
Coat Options	Yes No
*** Accessories that will be included with the Coats; listed below, if any...	
Flashlight Strap	Yes No
There shall be a 1x10" two layer self fabric flashlite strap X-stitched to shell with one piece 1x3" hook on one end and one piece 1x3" loop on the opposite end.	
Item Location for Above	Yes No
Shall be located on right chest just above chest trim and 1" over from the storm flap. There shall be a leather reinforcement patch on the inside of the coat shell.	
MISC. Fasteners	Yes No
Utility snap hook shall be attached to outer shell. Utility snap shall be securely riveted with (3) leather reinforced rivets.	
Item Location for Above	Yes No
Shall be located on the right side of the chest 4" above the flashlight strap.	
Dee-ring	Yes No
There shall be a 1"x5.5" self fabric strap folded over 2" and then end folded up 1.25" with 1" dee hanging from loop, bartacked to shell	
Item Location for Above	Yes No
Shall be located on the flap of each hem pocket; centered.	
Mic Tab	Yes No
There shall be a 1" X 3" triple layer self -fabric mic tab attached with bar tacks on each side. Bar tacks shall be a minimum 42-stitch bar tack	
Item Location for Above	Yes No
Shall be located on the left chest above the radio pocket and 1" over from the storm flap.	
Emblem	Yes No
There shall be a 2"x3" American Flag patch, with stars in the upper left corner, sewn to the coat.	
Item Location for Above	Yes No
Shall be located on the flap of the Radio Pocket.	
Sewn On Lettering	Yes No
There shall be 2" lime yellow Scotchlite letters, sewn-on the yoke; to read - CHATTANOOGA (line 1 arched); FD (line 2 straight).	

Detailed Description / Specification	Meets Requirements?
Lettering Patches	Yes No
<p>There shall be an option for a 5"x18" contoured 2-layer self-fabric one-line Letter Patch attached to hang from back hem via hook & loop and corner snaps. The options are to order with Coats, order separate loose, or have Coats ordered that are ready to receive a loose patch.</p>	
Sewn On Lettering	Yes No
<p>There shall be an option for 3" lime yellow Scotchlite letters, sewn-on to the hanging patch for FF Names.</p>	
Lettering	Yes No
<p>There shall be a Isodri Logo emblem.</p>	
Item Location for Above	Yes No
<p>Location shall be determined.</p>	
Coat Pockets	Yes No
Coat pocket	
Turn-Out Pockets	Yes No
<p>There shall be 9" x 9" Semi-bellow and handwarmer combination pockets that expand by means of side and bottom gussets to a thickness of 2" in back only and 0" in front. The pocket shall be set at the bottom of the coat hem and reflective trim shall be set on each pocket. There shall be a 6" opening on the rear side of the bellow of the pocket. Semi Bellow Pocket shall be fully lined inside with KEVLAR® twill and have a KEVLAR® twill backer. Handwarmer Pocket shall be lined inside with fleece 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 flap shall measure 10" wide by 3" high in front and 5" high in rear. Each flap shall incorporate a 1" by 2" polymer coated aramid pull tab for easy opening. The corner under this tab shall be reinforced with two layers of Lite-N-Dri™ for stability. A hook and loop closure system shall be set with two pieces of 1.5" x 3" loop fastener set horizontally on the outside edge of the pocket opening with corresponding 1.5" x 3" hook fastener set vertically on the underside of the flap.</p>	
Item Location for Above	Yes No
<p>Shall be located on left and right of the front bottom.</p>	
Turn-Out Pockets	Yes No
<p>There shall be a 3.5" wide x 8" deep full bellows radio pocket that expands by means of side and front gussets to a thickness of 2" in front and back. 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 4 sides inside pocket and flap with polycotton lining. Pocket flap shall close to the pocket top using 1 piece of 2"x 3" loop on pocket horizontally and 1 piece of 2"x 3" hook on flap vertically. Pocket flap shall include an antenna notch to accommodate an antenna.</p>	

Item Location for Above

Yes | No

Shall be located on the left side of the chest; bottom to be even with bottom of chest trim.

LION V-Force® Pant w/ Belt**Pant Model / Design**

Yes | No

PANT CONSTRUCTION: The pant shall have a low rise waist V-Fit™ design.

-- OR --

The pant shall have a traditional waist V-Fit™ design with an integrated lumbar support system. The lumbar support device shall provide mechanical support for the back by generating intra-abdominal pressure without increasing abdominal muscle activity. Components of the lumbar support system include a 6" x 8" orthopedic, non-absorbent, fire retardant, closed-cell foam pad, elastic webbing, metal adjusters, and pull tabs. The lumbar support system shall be oriented between the outer shell and liner. Each pant front shall have two tunnel openings reinforced with polymer coated aramid welts, for durability, spaced 7" apart on the front of the pant. Pull tabs, shall be constructed of black split cowhide leather, 1.5" wide x 5.5" long shall be sewn to two straps of 2" wide elastic webbing on each side of the pant. Elastic webbing shall be secured to center rear of pant. When the lumbar support system is deactivated, pull tabs shall be visible on the front of pants. 1.5" wide x 5.5" long loop fastener shall be sewn on the underside of each pull tab to engage the system. The right elastic straps shall each have a 2" wide x 5" long loop fastener sewn on the underside, while the left elastic straps shall each have a 2" wide x 5" long hook fastener sewn on top for engaging the system. The left side of the pant outer shell shall have 1.5" wide x 3" long hook fastener for storage of pull tab and to help engage system. The right side of pant shall have 1.5" wide x 3" long hook fastener for storage of pull tab and to assist in engaging the system. The foam pad shall have one 4" wide x 5" long strip of hook fastener to engage two 2" wide x 7" long strips of loop fastener sewn to the rear of the pant to secure pad in place. The inside of the outer shell is reinforced with a piece of KEVLAR® twill 10" wide by 7" high.

RADIAL INSEAM BAND: A radial banded insert runs continuously from the top of knee on one leg, through the crotch area to the top of the opposite knee. The elimination of crotch seams reduces tension in the crotch area to give added comfort and helps to alleviate stress to extend the useful life of the gear. Also there is an added insert piece in the design to help ensure that when the firefighter is kneeling or bending the leg of the garment bends in alignment with the leg so that the knee of the firefighter centers on the knee pad of the pant. It also helps to eliminate rubbing of the inseams of each leg against each other when the firefighter is working so that the risk of abrasion of the seams is minimized.

WAISTBAND: The waist of the pants shall be reinforced on the inside with 1-ply of outer shell fabric material not less than 1.5" in width. The pant waist shall be contour shaped for better comfort and hemmed to provide strength with the independent waistband, which shall then be double stitched to the outer shell.

Belts

Yes | No

An NFPA 1983, 2006 Edition escape belt shall be positioned through belt loops on the pants or coat. The belt shall be constructed of 2" Kevlar webbing and sewn with Kevlar thread. The belt closure shall be a snap and V-Ring. A D-ring attachment point shall be provided. When not in use this D-ring is secured out of the way by means of a one inch

Detailed Description / Specification

Meets Requirements?

by three inch loop and one inch by four inch hook strap. The belt shall also be adjustable for size at the V-Ring closure component. The extra adjustable length of the belt is conveniently held in position by means of a one and one half inch band of black elastic. The end of this strap is reinforced with a 1 1/2" band of poly coated aramid and stitched with a Z pattern for additional strength. The escape belt is certified for use up to 300 pounds. This belt is available for pants with a waist ranging from 26" through 50" only.

CMC 203304

Belt Loops

Yes | No

There shall be three belt loops of two-layers of self fabric, 4" wide by 3.5" high shall be double stitched to pant shell and bartacked at all four corners. One loop at center back and one loop on each side.

Pant Outer Shell Material

Yes | No

The outer shell shall be constructed of +/- 6.0 oz./sq. yd. 70% "PBI Dominant" PBI@/KEVLAR@ spun yarns/30% 600 denier KEVLAR@ filament in a twill weave with extremely durable FPE water resistant Teflon@ FPE alloy finish. Color shall be natural (gold).

Pant Liner & Moisture Barrier

Yes | No

THERMAL LINER: The thermal liner shall be comprised of Glide Ice™ high-lubricity, stress reducing, filament/spun face cloth weighing 3.6 oz/sq/yd. The Kevlar Nomex filament yarns shall represent no less than 60% of the face cloth's composition and shall be positioned in the warp direction of the weave in order to optimize their slippery characteristics on the face. Spun yarns comprised of 30% Nomex and 10% Lenzing FR spun yarns with superior wicking characteristics shall be used to promote moisture management within the garment. The Glide Ice™ face cloth shall be quilted to one layer spunlace aramid (85%NOMEX@/15% KEVLAR@) weighing approximately 2.3 oz./sq. yd. and one layer of apertured (11-13 apertures/sq. inch) spunlace aramid (85% NOMEX@/15% KEVLAR@) weighing approximately 1.5 oz./sq. yd. both layers shall be treated with a Teflon@ finish to promote minimal moisture storage in the garment as well as promote rapid drying (Total weight +/- 7.3 oz./sq. yd.).

MOISTURE BARRIER: CROSSTECH@ BLACK (Type 2F): NOMEX@ substrate laminated to a lightweight breathable, Teflon membrane; weighing 4.7 oz./sq. yd.

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 Semper Dri™ (3.0 oz./sq. yd. Teflon@ treated Chambray (NOMEX@ spun) face cloth quilted to two layers of NOMEX@/Kevlar@ spunlace (Total weight +/- 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 to the knee, an additional layer of 1/8" thick, fire retardant closed-cell foam shall be positioned between the moisture barrier and thermal liner at the knee.

Quilt Thermal Liner Construction: The moisture barrier shall be completely sewn to a

Teflon® 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.

Completely Removable: The moisture barrier/thermal liner shall be completely detachable from the outer shell for ease of cleaning by using snaps and hook and loop. Nine evenly spaced snaps shall secure the liner to the integral waistband; Two snaps shall be set in leather leg tabs at each leg end.

Reflective Trim

Yes | No

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

Ventilated Trim shall be of 3" Scotchlite II (triple trim) of lime/yellow perforated with 0.08 mm holes (114 per square inch) to provide a conduit for the release of vapor that can occur when moisture is heated and the trim compressed.

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

Pant Fly Closure

Yes | No

STORM FLY/CLOSURE: The outer shell shall have a sewn on overlapping fly front running the full length of the fly on the right side. The flap shall not be less than 2.5" wide at the waistband. The bottom of the fly shall be reinforced with a 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. Additionally, one snap shall be positioned at the inside top of the fly. Pant closure shall be provided by a thermo plastic zipper. 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 dee shall be made of a non ferrous metal alloy 2" long x 1 1/16" wide and secured by two leather backed rivets to the leading edge of fly flap.

The storm fly shall be outer shell material, lined with a 4" strip of CROSSTECH® Black (Type 2F) moisture barrier material and Semper Dri (3.0 oz/sq yd Teflon® treated Chambray (NOMEX® spun) facecloth quilted to two layers NOMEX®/Kevlar® spunlace (Total weight +/- 6.0-6.8 oz/sq yd)).

THERMAL FLY ASSEMBLY: A 3/4" wide x 9" long loop fastener shall be sewn to the moisture barrier/thermal liner to engage corresponding hook fastener on the underside of the outside storm fly and facing.

WAISTBAND: The waist of the pants shall be reinforced on the inside with one ply of outer shell fabric material not less than 1.5" in width. The pant waist shall be contour

Detailed Description / Specification

Meets Requirements?

shaped for better comfort and hemmed to provide strength with the independent waistband, which shall then be double stitched to the outer shell.

Take Up Straps

Yes | No

One adjustment device shall be affixed to the outside on each side of the pant. Each take-up strap shall be comprised of two sub-component straps. The front strap shall be 1" wide x 5" in length, folded in half to form a loop, and shall be affixed to the side of the pant by means of two bar tacks spaced 2" apart. The loop shall face toward the back and hold a nickel plated 1" metal loop. The back strap shall be 1" wide x 9" in length of double layered outer shell material and hook and loop fastener. The rear 4.5" shall be sewn and triple bartacked to the shell. The front section of the strap shall remain loose and be aligned so that it is threaded through the metal loop. It shall have a piece of 1" x 3" hook fastener attached to the loose strap end to engage the corresponding 1" x 4.5" loop fastener at end of strap to allow for adjustment.

Pant Knee Reinforcement

Yes | No

V-FIT™ KNEE: The knee shall have an insert throughout all layers that shall provide a natural bend in the leg. This knee shall include cut outs, shaped pieces, and darts to create free movement with few restrictions. The insert shall consist of black poly-coated aramid for abrasion resistance and thermal protection. For added thermal protection, an additional layer of uninterrupted 1/8" thick, fire retardant closed-cell foam shall be positioned between the moisture barrier and thermal liner. For additional extended thermal protection, three layers of uninterrupted 1/8" thick, fire retardant closed-cell foam shall be also be positioned between the reinforcement layer and outershell.

Pant Cuff Reinforcement

Yes | No

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. In addition a 3" x 3 1/2" piece of reinforcement material shall be sewn on the inseam area of the pant leg above the pant cuff and below the pant trim, in order to provide extra abrasion protection. The material used on the kick shield shall match the material used on the pants cuffs.

MISC. Pant Options

Yes | No

The back portion of the cuff will gradually curve upward from each side seam to a maximum of 2" at the center back of the pant leg to prevent wear on the back of the cuff.

Leg Tabs

Yes | No

Two grey leather leg tabs 3/4" wide x 1 3/4" long with female snaps shall be bartacked 2" up from bottom edge on inside of the pant cuff with one on the inseam and one on the outseam.

Liner Inspection System

Yes | No

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.

Pant Options

Yes | No

*** Accessories that will be included with the Pants; listed below, if any...

Pant Pockets

Yes | No

Pant pocket

Turn-Out Pockets

Yes | No

There shall be a 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. Pockets shall be reinforced with KEVLAR® twill fully lined all 4 sides 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 brass eyelets. Pocket flaps shall be 11" x 6". A hook and loop fastener closure system shall be set with 2" x 10" loop fastener horizontally on the pocket and (2) pieces of 2" x 4" hook fastener vertically on the underside of the flap.

Item Location for Above

Yes | No

Shall be located on the left thigh.

Turn-Out Pockets

Yes | No

There shall be a 9" wide x 10" high, outside full bellows pockets that expand by means of side and bottom gussets to a thickness of 2" in front and back. Pockets shall be fully lined with KEVLAR® twill on all 4 sides inside of pocket; two layers of KEVLAR® lined self-fabric on shell inside pocket. First layer 6.5" high, second layer 4.5" high. Both layers stitched in 3" increments to create six tool compartments. 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 is to be provided by brass eyelets. Pocket flaps shall be 5" x 10". A hook and loop fastener closure system shall be set with 2" x 9" loop fastener horizontally on the pocket and three pieces of 1.5" x 3" hook fastener vertically on the underside of the flap.

Item Location for Above

Yes | No

Shall be located on the right thigh.

Suspender Tabs

Yes | No

Four 2" wide self material suspender tabs with 1.75x3" leather reinforcement shall be attached to waist with two on the front and two on the back. Each tab shall have two

Detailed Description / Specification

Meets Requirements?

male and two female logo snaps. Each tab shall be reinforced with two bartacks on each tab.

Suspenders

Yes | No

SCOPE

A highly engineered 42" black suspender designed for greater range of mobility and reduced stress allowing for four points of attachment, using self-fabric, leather-reinforced suspender tabs with snaps, to a V-Force™, traditional or contoured waist bunker pant. The shoulder pads shall have a one-inch wide lime/yellow Scotchlite strip located the entire length facing outward

DESIGN

Two 8" front pull straps shall be constructed as follows: 2" wide non-elastic polyester webbing shall be fed through 2" metal loops and secured with a two-needle lock-stitch at one end. A black military finish steel double dee ring shall be fed through the webbing. The other end of the webbing shall be fed through a 2" wide thermo-plastic dee ring and secured with a two-needle lock-stitch. The dee ring shall function as a pull strap for easily adjusting the suspenders for proper fit.

Two 18" shoulder straps shall be constructed as follows: 2" wide non-elastic polyester webbing shall be fed through the top half of the steel double dee ring and secured with a two-needle lock-stitch. Two 7" back straps made of 2" wide elastic webbing shall be joined with a 2" overlap at the end of each shoulder strap with a single-needle lock stitch. The end of each back strap shall be fed through a 2" metal loop and secured with a two-needle lock stitch.

One 2 1/2" horizontal back strap made of 2" wide elastic webbing shall be set perpendicular between the two shoulder straps and back straps at the point of overlap, secured with a single-needle lock-stitch, and reinforced with a two-needle lock-stitch "X" through the joining straps.

Four 2" wide self-fabric suspender tabs with leather reinforcement, using 2 male and 2 female logo snaps for suspender attachment, shall be required on pants for use of these suspenders. Two self-fabric suspender tabs shall be attached to the back of the pant and to the front of the pant and reinforced with two bartacks each tab. Each self-fabric tab attached to the pants shall be fed through each 2" metal loop on the suspenders.

Each shoulder strap shall be encapsulated with a 2.25" wide x 13" long sheath of padding constructed of 1/8" thick fire-retardant closed-cell foam laminated to Nomex pajama check substrate. Shoulder pads shall start 1" up from the cross point of the horizontal back strap ("H" cross) and be bartacked at each end so they do not slide forward. The straps shall have a one-inch wide lime/yellow Scotchlite strip located the entire length, facing outward.