

CITY OF CROSSVILLE
REQUEST FOR QUOTATION

IMPORTANT: Read Instructions Carefully

THIS IS NOT AN ORDER
RETURN QUOTATION TO:

City Clerk
City of Crossville
392 North Main Street
Crossville, TN 38555

CRO#1379 Date Issued 04/11/16 Delivery required
as needed
For more information call To be opened date/hour
Chris South 931-484-7572 05/17/16 2:00 p.m.
Prices to be F.O.B
City of Crossville, Fire Department

NOTICE TO BIDDER

THIS IS NOT AN ORDER. Please enter unit prices, extensions, and amount for the items listed herein specified. Be sure the specifications are followed. If you are unable to supply any of the items, please quote on the nearest substitute either on this form, or attach a letter containing such description and it will be considered as part of your quotation. Prices quoted must include all delivery charges to points of delivery indicated hereon. **We reserve the right to accept or reject any or all bids.**

Bidder's Name _____
Bidder's Address _____

Please submit a bid for the following items for the period July 1, 2016 to June 30, 2018

Bidder may bid on these items as a package or individually.

1. Protective Clothing for Structural Firefighting
Jacket \$ _____ Pants \$ _____
 2. Structural Firefighters Helmet \$ _____
 3. Carbon Blend Firefighter Hood \$ _____
 4. NFPA Firefighting Glove #1 Spec. \$ _____
 5. Structural Firefighting Boot \$ _____
- Total Package Price \$ _____

For more information contact:
Chris South
931-484-7572

PLEASE SEE REVERSE SIDE FOR INSTRUCTIONS

IMPORTANT INSTRUCTIONS TO BIDDERS

1. Each Request for Quote should be in a **SEPARATE ENVELOPE** and have typed/noted on the envelope the **CRO#, ITEM, OPENING DATE, AND TIME**.
2. Specifications used in this request for proposal are intended to be open and non-restrictive. Reference to brand names, catalogs, etc., is to establish minimum standards of quality and does not preclude BUYER'S consideration of proposals on comparable quality. All bidders state brand name and catalog number of product proposed.
3. All prices quoted should be on a delivered prepaid basis to the F.O.B. destination shown in the shipping instructions.
4. Insert time discount terms, if any, in space provided. Discounts are computed from date of delivery at destination or date of receipt of properly executed vendor's invoice at agency indicated above, whichever is later.
5. The City of Crossville, a municipality, is exempt from sales tax with respect to materials that it purchases for municipal projects; however, the contractor who installs, applies or otherwise uses such materials, is liable for the use tax on those materials.
6. Unless otherwise indicated, quotations should be submitted on this form indicating unit price, total extension of each item, and grand total of quotation. In case of error in the extension prices, the unit price will govern.

TIME DISCOUNT ALL ITEMS _____
DELIVERY: We submit the prices and agree to make
delivery within _____ days after the receipt of order.
This offer is for _____ calendar days from the date this
bid is opened.

NOTICE: PROPOSAL WILL BE REJECTED
UNLESS SIGNED IN INK.

SIGNED BY: _____
Print name _____
FIRM: _____
ADDRESS: _____
City _____ State _____ Zip _____
Date: _____ Telephone _____

In submitting this bid, it is expressly agreed that upon proper acceptance by the City of Crossville of any or all items proposed, a contract shall thereby be created with respect to the items accepted.

Crossville Fire Department
Purchasing Specification
Structural Firefighters Helmet

PURPOSE:

To supply a purchasing specification for a structural firefighter's helmet with a thermoplastic traditional shell.

SCOPE:

The scope of this purchasing specification encompasses design, construction, materials and performance criteria deemed necessary for helmets utilized in structural firefighting.

GENERAL:

Helmets manufactured in accordance with this specification are designed to meet the requirements of NFPA 1971 standard for firefighter helmets – 2007 (or current) edition.

MANUFACTURER'S WARRANTY:

Helmets shall be warranted, for the lifetime of the helmet, to be free of defects in material and workmanship. The manufacturer shall guarantee, for a period of five (5) years from the date of manufacture, that any helmet shell will be replaced free of charge if it is damaged beyond use while being worn during normal, assigned fire ground activities. The manufacturer shall be relieved of any replacement liability under this guarantee if there has been a failure to follow the manufacturer's use and maintenance requirements supplied with each helmet

HELMET SHELL:

The helmet shall have a traditional American Fire Service style helmet shell, comprising a crown, with four(4) major ribs (front, back, left and right sides), and four minor ribs equidistant between each major rib, and a brim that has a short front visor continuing around the sides to a large rear watershed area. The upper surface of the watershed shall have a textured finish.

The helmet shell material consists of a high-temperature-, flame-, and chip-resistant, "through-colored" thermoplastic that is molded to form a one-piece shell.

The shell dimensions (with edge-trim) shall be 15.25" in length, 10.5" in width, and a height of 5.25".

The shell color finish shall be available in the standard colors of red, black and white. Additionally, the finish shall be matte.

The helmet shell shall be furnished with a collapsible formed brass front-piece holder, which shall be attached to the shell's front main rib, and positioned to capture the top of standard 5" or 6" fire department identification shields. The front holder shall be either a

flat brass piece with a silk-screened eagle or Maltese cross (5" & 6") or a formed brass eagle (6" only)

The shell shall have a thermoplastic, front-piece mounting bracket affixed to the center of the front visor of the brim. The bracket shall provide for positioning and retention of a standard 5" or 6" fire department identification shields.

The shell shall have black high-temperature, flame-resistant, flexible edge trim composed of an aluminum-cored, thermoplastic rubber (TPR). The edge-trim is secured around the entire brim of the helmet by crimping the aluminum core, which simultaneously captures and retains a wire used to reinforce the brim of the helmet. The edge-trim is secured at the mating ends with a high temperature adhesive and clamped by the helmet hanger clip at the edge of the rear brim.

The shell shall have a helmet hanger comprised of a 3/4", nickel-plated "D" ring and a stainless steel clip. The helmet hanger shall be attached to the center rear of the brim.

IMPACT LINER:

The impact liner will be comprised of a high temperature and high density rigid cell urethane foam cap, with continuous coverage over the entire dome area, for thermal, impact, and penetration protection.

SUSPENSION:

The suspension of the helmet shall consist of a 6-way overhead strap system (comprised of three (3) fixed, 3/4" wide nylon straps secured at their intersection to form the 6-way overhead strap assembly) which shall be attached to the impact cap by means of a tubular ring, joined at the ends by an elastomeric tube, that locks the straps into a routed annular groove in the impact cap.

SIZING ADJUSTMENT:

The size of the headband may be adjusted to fit the wearer's head by means of a ratchet adjustment system. The headband shall have a head size range of 5-5/8 to 7-5/8, adjustable in 1/8 increments. The headband is attached to the sides of the impact cap ring by four (4) flexible retention tabs. The rear ratchet arms shall have three (3) adjustable positions so that the angle of the ratchet may be set to accommodate the nape of the wearer's head.

COMFORT LINER:

The helmet shall have a comfort liner, which consists of a headband cushion liner and a ratchet pad, which are both removable. Both components are produced from a foam core laminate system, which is comprised of a soft black flame resistant flannel material against the users head and backed by a soft loop material, which will be secured, to the headband and the ratchet with hook fastener. The comfort liner is machine washable, and can be easily upgraded to a leather-lined deluxe version.

CHINSTRAP:

The chinstrap shall be constructed of three (3) pieces (or sections) of 3/4" wide, spun-Nomex® webbing, which are connected on the left side of the helmet by means of a high-temperature, super-tough, thermoplastic quick release buckle, and by a cast zinc postman's slide buckle on the right hand side of the helmet. The middle section shall be a minimum of 20.5" in length and the total length of the chinstrap shall be 33.0" at full extension, end to end.

The chinstrap shall be attached to the shell at either end by means of a stainless steel clip and tuck loop.

EAR/NECK PROTECTION

The helmet shall provide ear and neck protection with a 7.25" high, 18.5" long, full-cut earlap. The earlap consists of a 4.5 oz/yd, yellow (or black) Nomex outer shell, and a flame resistant black flannel inner-liner. The earlap shall be secured to the shell using an integrated hook system. A PBI/Kevlar earlap is an available option also.

The earlap is machine washable. The ear and neck protector shall be removable without interfering with the overhead strap assembly in any way and without removing any part of the helmets suspension.

EYE PROTECTION-OPTIONS:**FACESHIELD:**

The face shield shall be a wrap-around, high pivot design, 4.5" wide, 18.0" long and 0.150" thick. The lens material shall be high performance, high temperature resistant thermoplastic (tuffshield). The lens shall be coated with a scratch resistant coating on both inner and outer surfaces to protect the lens from abrasions.

FACESHIELD HARDWARE:

The face shield shall be mounted to the helmet shell by no means of two (2) glass-reinforced, high-temperature and flame-resistant thermoplastic bracket assemblies, with adjustable thermoplastic knobs - one (1) on either side of the helmet shell. The brackets allow the face shield to pivot above the brim line (with 6" frontpieces) or completely above helmet shell (with 5" frontpieces) when it is not in use.

GOGGLE SYSTEM:

The goggle system shall be comprised of a high-temperature, flame- and impact-resistant goggle lens and frame a flame resistant, elastic goggle strap, and a goggle retention system. This retention system will lock the goggle onto the helmet at the back brim, which will prevent loss of the goggle when it is stowed or in the donned position. The goggle can also be attached to the helmet with side-mounted hardware. This will allow the goggle to be stored in the front or back position of the helmet. The straps can be attached to the side hardware by means of lock down nuts through the straps or by a quick release fastener. Both inner and

outer surfaces of the goggle lens will have an anti-scratch and anti-fog coating. The lens will be low profile, optically correct with a nominal thickness of 1/16". The goggle strap will be adjustable to ensure a safe, snug fit on the face of the wearer.

BOURKE EYE SHIELDS:

The Bourke Eye Shield is comprised of dual (2), 2.85 wide x 5.15" long x 0.115" thick, transparent polycarbonate lenses that pivot up and down at 90 simultaneously to provide eye protection when the shield, is down, and are low-profile against the underside of the front brim when the lenses are flipped up. The inner edges of both lenses are designed to contact when the lens are flipped down. The lenses are fastened to a single keep and cable (spring) system that allows the two (2) lenses to move simultaneously. The entire assembly is mounted to a brass plate, which is secured to the center of the front brim of the helmet shell.

RETRO-REFLECTIVE TRIM:

The helmet shall have eight tetrahedron shaped pieces of Lime-Yellow, retro-reflective, fluorescent Reflexite trim around the exterior of the crown of the helmet shell for maximum daytime and nighttime visibility. (Lime-Yellow Glo-flex, Red-Orange & Lime-Yellow Scotchlite, and Red-Orange and Lime-Yellow Scotchlite triple trim tetrahedrons are also available.)

PERFORMANCE CRITERIA:

The helmet shall meet the requirements of NFPA 1971-2007 edition, US-OSHA (CFR 1920) NBSIR 1977, and CAL-OSHA.

PERFORMANCE VERIFICATION DATA REQUIREMENT:

Response to this specification shall include a current, NFPA 1971-2007 Certificate of Conformance test report from an accredited test facility for the helmet offered. This certification testing is conducted annually as per NFPA requirements.

MAINTENANCE, REPAIR AND RETIREMENT:

Upon the customer's request, training will be provided explaining the criteria for the proper maintenance, repair and retirement of the helmet.

**GENERAL SPECIFICATIONS
PROTECTIVE JACKET AND PANTS
FOR STRUCTURAL FIRE FIGHTING**

Crossville Fire Department, TN

SCOPE

This specification details design and materials criteria to afford protection to the upper and lower body, excluding head, hands, feet, against adverse environmental effects during structural fire fighting. All materials and construction will meet or exceed NFPA Standard #1971 and OSHA for structural fire fighters protective clothing.

Comply Exception

OUTER SHELL MATERIAL - JACKETS AND PANTS

The "**PbiMax™**" outer shell shall be manufactured by SAFETY COMPONENTS and constructed of 70/30 Pbi™ dominant Kevlar® with Kevlar® filament Comfort Twill weave. This outer shell fabric shall have an approximate weight of 7.0 oz. per square yard and must be treated with a durable water-repellent finish. Color of the garments shall be black .

Comply Exception

THERMAL INSULATING LINER - JACKET AND PANTS

The thermal liner shall be constructed of 6.8 oz. per square yard Safety Components **GLIDE™ GOLD with Pbi G2**; two layers of 20%Pbi/80% DuPont Aramid aperture spunlace quilt stitched to a to a 60% Kevlar® Filament/40% Nomex®/Lenzing spun yarn Face Cloth A 7 inch by 9 inch pocket, constructed of self material and lined with moisture barrier material, shall be affixed to the inside of the jacket thermal liner on the left side by means of a lock stitch.. The thermal liner shall be attached to the moisture barrier and bound together by bias-cut Neoprene coated cotton/polyester around the perimeter. This provides superior abrasion resistance to the less expensive, less durable "stitch and turn" method. Further mention of "Thermal Liner" in this specification shall refer to this section.

Comply Exception

MOISTURE BARRIER - JACKETS AND PANTS

The moisture barrier material shall be STEDFAST (**STEDAIR® GOLD**) ePTFE moisture barrier is engineered using an 80% Nomex®/20% Pbi® pajama check substrate and BHA Technologies ePTFE membrane, with an approximate weight of 5.2 oz. per square yard. The Stedair bi-component ePTFE membrane is a combination of microporous and monolithic technologies. The moisture barrier material shall meet all moisture barrier requirements of NFPA 1971-2013 edition, which includes water penetration resistance, viral penetration resistance and common chemical penetration resistance. The moisture barrier shall be sewn to the thermal liner at the edges only and bound with bias-cut neoprene-coated cotton/polyester binding. Further mention of "Specified Moisture Barrier" in this specification shall refer to this section.

Comply Exception

SEALED MOISTURE BARRIER SEAMS

All moisture barrier seams shall be sealed with a minimum 1 inch wide sealing tape. One side of the tape shall be coated with a heat activated glue adhesive. The adhesive side of the tape shall be oriented toward the moisture barrier seam. The adhesive shall be activated by heat and the sealing tape shall be applied to the moisture barrier seams by means of pressure exerted by rollers for that purpose.

_____ Comply _____ Exception

METHOD OF THERMAL LINER/MOISTURE BARRIER ATTACHMENT FOR JACKETS AND PANTS

The position of the male snap portion on the liner shall be positioned in exactly the same location of similar liner sizes and the female snap portion on the outer shell shall be positioned in exactly the same location of similar shell sizes. The remainder of the thermal liner/moisture barrier shall be secured with snap fasteners appropriately spaced on each jacket facing and Ara-Shield® snap fasteners at each sleeve end. One of the Ara-shield® snap tabs shall be a different color in the liner to correspond with color coded snap tabs for ease of matching the liner system to the outer shell after inspection or cleaning is completed. The jacket collar, which is attached to the liner assembly, shall interface with the annular neck tab on the outer shell with hook and loop fastener tape (see Collar / Free Hanging Throat Tab).

The thermal liner and moisture barrier shall be completely removable from the pant shell. Nine snap fasteners shall be spaced along the waistband to secure the thermal liner/moisture barrier to the shell. The legs of the thermal liner/moisture barrier shall be secured to the shell by means of Ara-Shield® snap fasteners, 2 per leg. The Ara-shield® snap tabs shall be color coded to a corresponding snap tab in the liner for ease of matching the liner system to the outer shell after inspection or cleaning is completed.

_____ Comply _____ Exception

THERMAL PROTECTIVE PERFORMANCE

The assembled garment, consisting of an outer shell, moisture barrier, and thermal liner, shall exhibit a TPP (Thermal Protective Performance) rating of not less than 35.

_____ Comply _____ Exception

STITCHING

The outer shell shall be assembled using stitch type #301, #401, #514 and #516. The thermal liners and moisture barriers shall be assembled using stitch type #301, #401, #504, #514, and #516. Stitching in all seams shall be continuous. Major A outer shell structural seams, major B structural liner seams and shall have a minimum of 8 to 10 stitches per inch. All Major A seams shall be sewn with ball point needles only. All seams shall be continuously stitched only.

_____ Comply _____ Exception

JACKET CONSTRUCTION

BODY

The body of the outer shell shall be constructed of three separate panels consisting of two front panels and one back panel. The body panels shall be shaped so as to provide a tailored fit thereby enhancing body movement and shall be joined together by double stitching with Nomex® thread. One-piece outer shells shall not be acceptable.

_____Comply _____Exception

SIZING

The jacket length shall be measured from the juncture of the collar and back panels to the hem of the jacket and shall measure 32 inches long (standard).

The jacket shall be available in male and female patterns in even size chest measurements of two inch increments, and shall range from a small size of 30 to a large size of 68. Generalized sizing, such as small, medium, large, etc., will not be considered acceptable.

_____Comply _____Exception

DRAG RESCUE DEVICE (DRD)

A Firefighter Drag Rescue Device shall be installed in each jacket. The ends of a 1½ inch wide strap, constructed of black Kevlar® with a red Nomex® center stripe, will be sewn together to form a continuous loop. The strap will be installed in the jacket between the liner system and outer shell such that when properly installed will loop around each arm. The strap will be accessed through a portal between the shoulders on the upper back where it is secured in place by an FR strap. The DRD shall be removable for laundering. The access port will be covered by an outside flap of shell material, with beveled corners designed to fit between the shoulder straps of an SCBA. The flap will have a NFPA-compliant 3M Scotchlite™ reflective logo patch sewn to the outside to clearly identify the feature as the DRD (Drag Rescue Device). The DRD shall not extend beyond the outside flap. This device provides a quickly deployed means of rescuing a downed firefighter. Flimsy, rope-style DRD straps will not be considered.

_____Comply _____Exception

LOGOS

The garment brand shall be identified by means of red FR Nomex thread embroidery on the top of the right collar denoting "CAIRNS" as the manufacturer. There shall be a reflective label specific to the garment style, measuring 1inch wide by 4 inches long, installed on the left pocket flap.

_____Comply _____Exception

LINER ACCESS OPENING - JACKET

The liner system of the jacket shall incorporate an opening at each of the leading edges of the left and right front panels. This opening shall run a minimum of 12 inches along the perimeters for the purpose of inspecting the integrity of the jacket liner system. When installed into the outer shell the Liner Access Opening will be covered and protected by the overlap of the outer shell facing.

_____Comply _____Exception

RETROREFLECTIVE FLUORESCENT TRIM

The retroreflective fluorescent trim shall be lime/yellow 3M Scotchlite™ Triple Trim (L/Y borders with silver center). Each jacket shall have an adequate amount of retroreflective fluorescent trim affixed to the outside of the outer shell to meet the requirements of NFPA #1971 and OSHA.

The trim shall be in the following widths and shall be **High Visibility (HV) style**; 3 inch wide stripes - around the bottom of the jacket within approximately 1 inch of the hem, horizontally across the chest area approximately 3 inches below the armpit, around each sleeve below the elbow, around each sleeve above the elbow, across the shoulders on the back approximately 7½ inches below the neck seam, two vertical stripes on the back (one on each side) beginning at the top of the bottom band of trim and extending up to the bottom of the upper band of trim.

Comply Exception

REINFORCED TRIM STITCHING

All reflective trim is secured to the outer shell with Nomex® thread, using a locking chainstitch protected by our exclusive TrimTrax® system. Developed exclusively by Globe Manufacturing Co., LLC. this strip of 3/32-inch strong, durable, flame resistant black Kevlar® cording provides a bed for the stitching along each edge of the retroreflective fluorescent trim surface and affords extra protection for the thread from abrasion. TrimTrax® has been proven to be 5 to 7 times more durable than single or even double rows of stitching, significantly reducing maintenance costs and providing more value and a longer service life. Two rows of stitching used to attach the trim in place of the TrimTrax® shall be considered an unacceptable alternative, since it has been proven that the two rows of stitching has insignificant impact on wear life. All trim ends shall be securely sewn into a seam for a clean finished appearance.

Comply Exception

SEWN ON RETROREFLECTIVE LETTERING (OPTIONAL)

Each jacket shall have either 2" or 3" lime/yellow 3M Scotchlite™ lettering the Velcro letter patch reading: (FF NAME)

Comply Exception

LETTER PATCH

FR Velcro® Letter Patch

Lettering will be on a FR Velcro® letter Patch. The FR Velcro® letter patch shall be constructed of a double layer of outer shell material. The letter patch will attach to the back of the jacket with FR Velcro® hook & loop fastener tape. Location of the patch shall be determined by the department.

Comply Exception

COLLAR & FREE HANGING THROAT TAB

The collar shall be of 4 layer construction, consisting of a minimum two layers of the specified moisture barrier between two layers of outer shell material. The collar shall have a minimum of 3 rows of quilting. The collar shall be a minimum 3½ inches high at the back center and graded proportionately to body size. The inside rear layer of moisture barrier shall be bound to the rear layer of outer shell at the perimeter only. The rear layer of outer shell shall have four rows of lateral stitching enhancing stability and shape of the collar.

The forward outer shell and moisture barrier layers of the collar shall be bound to the liner/moisture barrier assembly and then felled with two rows of stitching. The front layer of outer shell shall be

attached to the thermal liner layer of the liner system. The front layer of moisture barrier shall be attached to the moisture barrier layer of the liner system and seam sealed.

This design shall provide a pocket for interface with an annular neck tab on the outer shell. The annular tab will be constructed of a layer of outer shell material and shall be sewn to the top neck opening of the outer shell and finished along the edge by means of overedging. A row of 5/8 inch FR Velcro[®] hook fastener tape shall be sewn to the rear of the tab, installed in such a manner as to align with the corresponding loop fastener tape inside the collar.

The throat tab shall be a scoop type design and constructed of two plies of outer shell material with two center plies of moisture barrier material. The throat tab shall measure not less than 4 inches wide at the center tapering to 2 inches at each end with a total length of approximately 9 inches. The throat tab will be attached to the right side of the collar by a 1 inch wide by 1½ inch long piece of Nomex[®] twill webbing. The throat tab shall be secured in the closed and stowed position with FR Velcro[®] fastener tape. The FR Velcro[®] fastener tape shall be oriented to prevent exposure to the environment when the throat tab is in the closed position. Two 2 inch by 3 inch pieces of FR Velcro[®] loop shall be sewn vertically to the inside of each end of the throat tab. Corresponding pieces of FR Velcro[®] hook measuring 1 inch by 3 inches shall be sewn horizontally to the leading outside edge of the collar on each side, for attachment and adjustment when in the closed position and wearing a breathing apparatus mask. In order to provide a means of storage for the throat tab when not in use, a 1 inch by 3 inch piece of FR Velcro[®] hook shall be sewn horizontally to the inside of the throat tab immediately under the 1½ inch by 3 inch pieces of FR Velcro[®] loop. The collar closure strap shall fold in half for storage with the FR Velcro[®] loop fastener tape engaging the FR Velcro[®] hook fastener tape.

A hanger loop constructed of a double layer of outer shell material shall be sewn to the top inside of the collar at the center.

Comply Exception

JACKET FRONT

The jacket shall incorporate separate facings to ensure there is no interruption in thermal or moisture protection in the front closure area. The facings shall measure approximately 3 inches wide, extend from collar to hem, and be double stitched to the underside of the outer shell at the leading edges of the front body panels. A breathable moisture barrier material shall be sewn to the jacket facings and configured such that it is sandwiched between the jacket facing and the inside of the respective body panel. The breathable film side shall face inward to protect it. There shall be wicking barrier constructed of Crosstech 2F moisture barrier material installed on the front closure system on the left and right side directly below the front facings to ensure continuous protection and overlap. The wicking barrier shall extend no more than a maximum of ¼" beyond the inner facing and false facing shall be unacceptable. The thermal liner and moisture barrier assembly shall be attached to the jacket facings by means of snap fasteners.

Comply Exception

STORM FLAP

A rectangular storm flap measuring 3¼ inches wide and 22 inches long shall be centered over the left and right body panels to ensure there is no interruption in thermal or moisture protection in the front of the jacket. The outside storm flap shall be constructed of two plies of outer shell material with a center ply of breathable moisture barrier material. The outside storm flap shall be double stitched to the right side body panel and shall be reinforced at the top and bottom with bartacks.

Comply Exception

STORM FLAP AND JACKET FRONT CLOSURE SYSTEM

The jacket shall be closed by means of a 22 inch size #10 heavy duty high-temp smooth-gliding YKK Vislon® zipper on the jacket fronts and FR Velcro® fastener tape on the storm flap. The teeth of the zipper shall be mounted on black Nomex® tape and shall be sewn into the respective jacket facings. The storm flap shall close over the left and right jacket body panels and shall be secured with FR Velcro® fastener tape. A 1½ inch piece of FR Velcro® loop fastener tape shall be installed along the leading edge of the storm flap on the underside with four rows of stitching. A corresponding 1½ inch piece of FR Velcro® hook fastener tape shall be sewn with four rows of stitching to the front body panel and positioned to engage the loop fastener tape when the storm flap is closed over the front of the jacket.

_____ Comply _____ Exception

CARGO/HANDWARMER SEMI-EXPANSION POCKETS

Each jacket front body panel shall have a 2 inch deep by 9 inch wide by 8 inch high semi-expansion pockets. The leading edge of the pockets shall be sewn flush with the jacket and the rear of the pockets shall expand to a depth of 2 inches. The pockets will be double stitched to the jacket and shall be located such that the bottoms of the pockets are at the bottom of the jacket for full functionality when used with an SCBA. Retroreflective trim shall run over the bottom of the pockets so as not to interrupt the trim stripe. Two rust resistant metal drain eyelets shall be installed in the bottom of each expansion pocket to facilitate drainage of water. *The pocket shall be reinforced with an extra layer of outer shell material approximately 5 inches up on the inside.* The pocket flaps shall be rectangular in shape, constructed of two layers of outer shell material and shall measure 3 inches deeper than the pocket expansion and ½ inch wider than the pocket. The upper pocket corners shall be reinforced with proven backtacks and pocket flaps shall be reinforced with bartacks. The pocket flaps shall be closed by means of FR Velcro® hook and loop tape. Two pieces of 1½ inch by 3 inch FR Velcro® hook fastener tape shall be installed vertically on the inside of each pocket flap (one piece on each end). Two corresponding pieces of 1½ inch by 3 inch FR Velcro® loop fastener tape shall be installed horizontally on the outside of each pocket near the top (one piece on each end) and positioned to engage the hook fastener tape.

Additionally, a separate hand warmer pocket compartment will be provided under the expandable cargo pocket. This compartment will be accessed from the rear of the pocket and shall be lined with Nomex® Fleece for warmth and comfort.

_____ Comply _____ Exception

AXTION® SLEEVES

The sleeves shall be of two piece construction and contoured, having an upper and a lower sleeve. Both the under and upper sleeve shall be graded in proportion to the chest size. For unrestricted movement, on the underside of each sleeve there shall be two outward facing pleats located on the front and back portion of the sleeve on the shell and thermal liner. On the moisture barrier, the system will consist of two darts, rather than pleats, to allow added length in the under sleeve. The moisture barrier darts will be seam sealed to assure liquid resistance integrity.

The pleats shall expand in response to upper arm movement and shall fold in on themselves when the arms are at rest. This expansion shall allow for greater multi-directional mobility and flexibility in the shoulder and arm areas, with little restriction or jacket rise. Neither stove-pipe nor raglan-style sleeve designs will be considered acceptable.

_____ Comply _____ Exception

SLEEVE CUFF REINFORCEMENTS

The sleeve cuffs shall be reinforced with grey suede leather. The cuff reinforcements shall not be less than 2 inch in width and folded in half, approximately one half inside and one half outside the sleeve end for greater strength and abrasion resistance. The cuff reinforcement shall be double stitched to the sleeve end; a single row of stitching shall be considered unacceptable. This independent cuff provides an additional layer of protection as compared to a turned and stitched cuff. Jackets finished with a turned and stitched cuff do not provide the same level of abrasion resistance and will be considered unacceptable.

_____Comply _____Exception

WRISTLETS / ELASTICIZED ADJUSTABLE SLEEVE WELLS

Each jacket shall be equipped with **Nomex® knit wristlets** not less than 4 inches in length and of double thickness. Nomex® knit is constructed of 96% Nomex® and 4% Spandex for shape retention. The color of the wristlets shall be white, grey.

The wristlets shall be sewn to the end of the liner sleeves. Flame resistant neoprene coated cotton/polyester impermeable barrier material shall be sewn to the inside of the sleeve shell approximately 5 inches from the sleeve end and extending toward the cuff forming the sleeve well. The neoprene sleeve well shall form an elasticized cuff end with an FR Velcro® tab providing a snug fit at the wrist and covering the knit wristlet. This sleeve well configuration serves to prevent water and other hazardous elements from entering the sleeves when the arms are raised. The neoprene barrier material shall also line the inside of the sleeve shell from the cuff to a point approximately 5 inches back, where it joins the sleeve well and is double stitched to the shell. Four Ara-shield® snap tabs will be sewn into the juncture of the sleeve well and wristlet. The tabs will be spaced equidistant from each other and shall be fitted with female snap fasteners to accommodate corresponding male snaps in the liner sleeves. . One of the Ara-shield® snap tabs shall be a different color in the liner to correspond with color coded snap tabs for ease of matching the liner system to the outer shell after inspection or cleaning is completed. This configuration will ensure there is no interruption in protection between the sleeve liner and wristlet.

_____Comply _____Exception

LINER ELBOW THERMAL ENHANCEMENT

An additional layer of thermal liner material shall be sewn to the elbow area of the liner system for added protection at contact points and increased thermal insulation in this high compression area. The elbow thermal enhancement layers shall be sandwiched between the thermal liner and moisture barrier layers of the liner system and shall be stitched to the thermal liner layer only. Finished dimension shall be 5" x 7". All edges shall be finished by means of overedging. Raw or unfinished edges shall be considered unacceptable. Thermal scraps shall not be substituted for full-cut fabric padding.

_____Comply _____Exception

LINER SHOULDER, FRONT AND UPPER BACK THERMAL ENHANCEMENT

A minimum of one additional layer of thermal liner material shall be used to increase thermal insulation in the upper back, front and shoulder area of the liner system. This full-cut thermal enhancement layer shall drape over the top of each shoulder extending from the collar to the sleeve/shoulder seam, down the front approximately 5 inches from the juncture of the collar down the back to a depth of approximately 7 inches to provide greater CCHR protection in this high compression area. The upper back, front and shoulder thermal enhancement layers shall be sandwiched between the thermal liner and moisture barrier layers of the liner system and shall be stitched to the thermal liner layer only. The thermal enhancement layer shall have finished edges by means of overedging. Raw or unfinished edges shall be considered unacceptable. Thermal scraps

shall not be substituted for full-cut fabric padding. Smaller CCHR reinforcements shall not be considered acceptable since they provide far less area of coverage.

_____Comply _____Exception

RADIO POCKET

Each jacket shall have a pocket designed for the storage of a portable radio. This pocket shall be of box type construction, double stitched to the jacket and shall have one drainage eyelet in the bottom of the pocket. The pocket flap shall be constructed of two layers of outer shell material measuring approximately 5 inches deep and ¼ inch wider than the pocket. The pocket flap shall be closed by means of FR Velcro® fastener tape. A 1½ inch by 3 inch piece of FR Velcro® hook fastener tape shall be installed on the inside of the pocket flap beginning at the center of the bottom of the flap. A 1½ inch by 3 inch piece of FR Velcro® loop fastener tape shall be installed horizontally on the outside of the pocket near the top center and positioned to engage the hook fastener tape. In addition, the entire inside of the pocket shall be lined with neoprene coated cotton/polyester impermeable barrier material to ensure that the radio is protected from the elements. The impermeable barrier material shall also be sandwiched between the two layers of outer shell material in the pocket flap for added protection. The radio pocket shall be installed on the left chest. The size shall be determined by the department. Note: radio pocket 6-inch and over in height requires trim.

_____Comply _____Exception

MICROPHONE STRAPS

The straps shall be constructed to hold a microphone for a portable radio. They shall be sewn to the jacket at the ends only. The size of the microphone straps shall be 1 inch x 3 inches. One microphone strap shall be mounted on the right chest and the second shall be above the radio pocket. Both shall be constructed of double layer outer shell material.

_____Comply _____Exception

SURVIVOR FLASHLIGHT HOLDER

Each jacket shall be equipped with a "Survivor" flashlight holder. An inward facing metal safety coat hook shall be triple riveted in a vertical position to the upper chest. The inward facing coat hook will accommodate the clip portion of the flashlight. Below the coat hook will be a strap constructed of outer shell material measuring approximately 2½ inches high and 9 inches wide, and will hold the barrel of the flashlight. The lower strap will be equipped with a 1½ inch by 2½ inch FR Velcro® closure at the front of the strap to facilitate easy removal of the flashlight. There shall be approximately 3 inches between the upper coat hook and lower strap. The "Survivor" flashlight holder shall be sewn to the jacket on the

left chest.
right chest.

_____Comply _____Exception

3-INCH EXTENSION PANEL SYSTEM (XPS)

The hem of the jacket and liner system shall be constructed with extension panels incorporating all 3-layers of the system (outer shell, thermal liner & moisture barrier). The panels will be double stitched to the hem and extend approximately 3 inches lower in the back than the front of the jacket providing and maintaining proper overlap when bending or crawling.

The bottom of the 3 inch extended outer shell panel will be complete with the specified trim. The hem trim of the jacket shall stop at the juncture of the extension panel, staggering the trim, such that the top corners of the trim on the extension panel align with the bottom corners of the trim at the jackets hem. The staggered trim provides room for lettering at the very hem of the jacket in line with the trim on the front of the jacket hem.

_____Comply _____Exception

PANT CONSTRUCTION

BODY

The body of the shell shall be constructed of four separate body panels consisting of two front panels and two back panels. The body panels shall be shaped so as to provide a tailored fit, thereby enhancing body movement, and shall be joined together by double stitching with Nomex® thread. The body panels and seam lengths shall be graded to size to assure accurate fit in a broad range of sizes.

The front body panels will be wider than the rear body panels to provide more fullness over the knee area. This is accomplished by rolling the side leg seams (inside and outside) to the rear of the pant leg beginning at the knee. The slight taper will prevent premature wear of the side seams by pushing them back and away from the primary high abrasion areas encountered on the sides of the lower legs.

_____Comply _____Exception

AXTION® SEAT

The rise of the rear pant center back seam, from the top back of the waistband to where it intersects the inside leg seams at the crotch, shall exceed the rise at the front of the pant by 8 inches. The longer rear center back seam provides added fullness to the seat area for extreme mobility without restriction when stepping up or crouching and will be graded to size. This feature in combination with other design elements will maintain alignment of the knee directly over the knee pads when kneeling and crawling.

_____Comply _____Exception

LINER SYSTEM (PANT)

The combined moisture barrier and the thermal liner shall be completely removable for the pant. The thermal liner and moisture barrier layers of the ReaXtion liner system shall be stitched together and bound around the top waist and cuffs with Bias-Cut neoprene coated cotton/polyester binding for a finished appearance that prevents fraying and wicking of contaminants.

The body of the liner system (thermal liner & moisture barrier) shall be of a four piece design to match the cut of the shell to include the rolled back side seams. The design of the liner system will incorporate darts in the knee area providing a contour to the leg and will also have a reverse boot cut at the rear of the liner cuff and a concave cut at the front to keep the liner from hanging below the shell.

The liner system shall have a reinforcement of black Nomex® twill sewn to the bottom of the fly opening. This reinforcement will serve to prevent the liner from tearing in that area from the constant donning and doffing of the pants.

_____ Comply _____ Exception

LINER ACCESS OPENING - PANT

The liner system of the pant shall incorporate a full length opening along the entire waistline for ease in inspecting the inner layers as well as performing the complete Liner Inspection. The thermal liner and moisture barrier shall be individually bound with a neoprene coated bias cut tape, and joined together with a snap at the center back. There shall be a minimum of 4 snap tabs sewn to the underside of the waistband, with corresponding snaps in the moisture barrier layer to secure the barrier to the shell. As described previously, the pant thermal layer snaps directly to the independent waistband by means of nine snap fasteners. There shall be no hook and loop used to close the liner access opening.

_____ Comply _____ Exception

SIZING

The pants shall be available in even size waist measurements of two inch increments and shall be available in a range of sizes from 24 to 68. The pant inseam measurement shall be available in two inch increments. Generalized sizing, such as small, medium, large, etc., will not be considered acceptable. Sizing specifically for women shall also be available.

_____ Comply _____ Exception

RETROREFLECTIVE FLUORESCENT TRIM

The pants shall have a stripe of retroreflective fluorescent trim encircling each leg below the knee to comply with the requirements of NFPA #1971 in 3 inch lime/yellow 3M Scotchlite™ Triple Trim (L/Y borders with silver center). Bottom of trim band shall be located approximately 3" above cuff.

_____ Comply _____ Exception

REINFORCED TRIM STITCHING

All reflective trim is secured to the outer shell with Nomex® thread, using a locking chainstitch protected by our exclusive TrimTrax® system. Developed exclusively by Globe Manufacturing Co., LLC. this strip of 3/32-inch strong, durable, flame resistant black Kevlar® cording provides a bed for the stitching along each edge of the retroreflective fluorescent trim surface and affords extra protection for the thread from abrasion. TrimTrax® has been proven to be 5 to 7 times more durable than single or even double rows of stitching, significantly reducing maintenance costs and providing more value and a longer service life. Two rows of stitching used to attach the trim in place of the TrimTrax® shall be considered an unacceptable alternative, since it has been proven that the two rows of stitching has insignificant impact on wear life. All trim ends shall be securely sewn into a seam for a clean finished appearance.

_____ Comply _____ Exception

WAISTBAND

The pant design facilitates the transfer of the weight of the pant to the hips instead of the shoulders and suspenders. The waist area of the pants shall be reinforced on the inside with a separate piece of black aramid outer shell material not less than two inches in width. Neoprene coated cotton/polyester shall be sewn to the back of the waistband as a reinforcement. The aramid/neoprene waistband shall be cut on the bias to allow the waistband to stretch for unrestricted movement and increased comfort. The top edge of the waistband reinforcement shall be double stitched to the outer shell at the top of the pants. The lower edge of the waistband shall

be serged and unattached to the shell to accept the thermal liner and moisture barrier. The top of the thermal liner and moisture barrier shall be secured to the underside of the waistband reinforcement so as to be sandwiched between the waistband reinforcement and outer shell to reduce the possibility of liner detachment while donning and to avoid pass through of snaps from the outer shell to the inner liner.

Comply Exception

BLACK ARAMID BELT WITH BELT LOOPS

Each pant shall include a 2 inches wide belt constructed of black aramid webbing material with an adjustable hi-temp thermoplastic Delrin buckle serving as the exterior primary positive locking closure. This buckle shall also provide a quick-release mechanism for donning and doffing.

The pants shall be equipped with a series of outer shell material belt loops spaced around the waist to accommodate the aramid belt.

Comply Exception

ESCAPE BELT (OPTIONAL)

The pant shall have an integrated Escape Belt, which is independently certified as meeting the belt requirements of NFPA 1983, Standard on Life Safety Rope and Equipment for Emergency Services. The Escape belt shall be comprised of Kevlar® webbing with a hook and an adjustable D-ring closure, graded for the waist size of the pants. The hook and dee closure system of the Escape Belt also serves as the positive front closure for the pants, eliminating redundant closure systems.

Comply Exception

EXTERNAL/INTERNAL FLY FLAP

The pants will have a vertical outside fly flap constructed of two layers of outer shell material, with a layer of moisture barrier material sandwiched between. The fly flap shall be double stitched to the left front body panel and shall measure approximately 2 ½ inches wide, with a length graded to size based on waist measurement and reinforced with bartacks at the base. An internal fly flap constructed of one layer of outer shell material, thermal liner and specified moisture barrier, measuring approximately 2 inches wide, with a length graded to size based on waist, shall be sewn to the leading edge of the right front body panel. The inside of the right front body panel shall be thermally enhanced directly under the outside fly with a layer of moisture barrier and thermal liner material.

The underside of the outside fly flap shall have a 1½ inch wide piece of FR Velcro® loop fastener tape quadruple stitched along the full length and through the shell material only; stitching shall not penetrate the moisture barrier insert between the two layers to insure greater thermal protection and reduced water penetration. A corresponding strip of 1½ inch wide piece of FR Velcro® hook fastener tape shall be quadruple stitched to the outside right front body panel securing the fly in a closed position.

Appropriate snap fastener halves shall be installed at the leading edge of the waistband for the purpose of further securing the pants in the closed position.

Comply Exception

AXTION® KNEE

The outer shell of the pant legs shall be constructed with horizontal expansion pleats in the knee area with corresponding darts in the liner to provide added fullness for increased freedom of movement and maximum flexibility. The pleats shall be folded to open outwardly towards the side seams to insure no restriction of movement. The AXTION® knee will be installed proportionate to the pant inseam, in such a manner that it falls in an anatomically correct knee location.

The thermal liner shall be constructed with four pleats per leg in the front of the knee. Two will be located above the knee (one on each side) and two will be located below the knee (one on each side). On the moisture barrier, the system will consist of two darts, rather than pleats, to allow added length in the under knee. The darts in the liner provide a natural bend at the knee. The pleats and darts in the liner work in conjunction with the expansion panels in the outer shell to increase freedom of movement when kneeling, crawling, climbing stairs or ladders, etc.

_____ Comply _____ Exception

LINER KNEE THERMAL ENHANCEMENT

A minimum of one additional layer of specified thermal liner and one additional layer of moisture barrier material, measuring a minimum of 9 inches by 11 inches, will be sewn to the knee area of the liner system for added CCHR protection and increased thermal insulation in this high compression area. The knee thermal enhancement layers shall be sandwiched between the thermal liner and moisture barrier layers of the liner system and shall be stitched to the thermal liner layer only. The thermal enhancement layer shall have finished edges by means of overedging. Raw or unfinished edges shall be considered unacceptable. Thermal scraps shall not be substituted for full-cut fabric padding. Smaller CCHR reinforcements shall not be considered acceptable since they provide far less area of coverage.

_____ Comply _____ Exception

KNEE REINFORCEMENTS

The knee area shall be reinforced with a layer of black Dragonhide® material. The knee reinforcement shall be centered on the leg to insure proper coverage when bending, kneeling and crawling. The knee reinforcements shall measure 9 inches wide by 12 inches high and shall be double stitched to the outside of the outer shell in the knee area for greater strength and abrasion resistance. Knee reinforcements of a smaller size do not provide the same protective coverage and shall be considered unacceptable. The knee reinforcement specified shall be removable without opening up any seams of the outer shell of the pant.

_____ Comply _____ Exception

PADDING UNDER KNEE REINFORCEMENTS

Padding for the knees shall be accomplished with one layer of Silizone® foam sewn to the liner, sandwiched between the outer shell and knee reinforcement.

_____ Comply _____ Exception

ANGLED EXPANSION (BELLOWS) POCKET

A 1 ½ inch deep by 10 inch wide by 8 inches to 11 inches angled bellows pocket shall be placed over the outer left leg seams at thigh level. The pocket shall be sewn to the pant with two rows of lock stitching and shall provide two aluminum eyelets, installed at the bottom of the pocket, for water drainage. *The lower portion of the pocket shall be reinforced with an additional layer of outer*

shell material, angled half way up the since of the pocket. The pocket flap shall be rectangular in shape, constructed of two layers of outer shell material and double stitched to the outer shell. One piece of 1½ inch by 3 inch FR Velcro® hook fastener tape on the inside of the pocket flap on each side. One piece of corresponding 1½ inch by 3 inch FR Velcro® loop fastener tape shall be installed horizontally on the outside of each side of pocket near the top and positioned to engage the hook fastener tape. The pocket shall be reinforced with proven backtacks, and pocket flap shall be reinforced with bartacks in uppermost corners.

_____ Comply _____ Exception

ESCAPE SYSTEM POCKET

One 2 inches deep by 7 inches wide by 9 inches high expansion pocket shall be placed over the outer RIGHT leg seam at thigh level to accommodate storage and deployment of a Petzl EXO descender system. The pocket shall be sewn to the pant with two rows of lock stitching and shall provide two drain eyelets, installed at the bottom of each pocket, for water drainage. The pocket shall be reinforced with a layer of DragonHide® material sewn to the outside. The DragonHide® shall form a pocket on the front of the pocket with stitching down the middle of the reinforcement to fit a "Crosby" style hook with a smaller 1½ by 2½ inch pocket to the left of the center stitching. The pocket flap shall be rectangular in shape and measure approximately 8½ inches by 11 inches, constructed of two layers of outer shell material and double stitched to the outer shell. The lower edge of the flap shall have padding stitched between the two layers to allow a better grip on the flap. Two pieces of 1½ inch by 10 inch FR hook fastener tape shall be installed on the inside of each pocket flap (one on each side). The outside end of each piece of hook fastener shall be backed with a 1 inch by 1 inch piece of black Ara-Shield® to assist in separating the fastener tape. Two pieces of 1 inch by 9 inch loop fastener tape shall be installed on the front of the pocket (one on each side). The pocket flap shall be reinforced with bartacks at the uppermost corners. The upper left side of the pocket shall angle downward to allow a loop constructed of a double layer of outer shell material to be installed above the side edge of the pocket. This loop will hold a smaller carabiner inside the pocket. A self material shelf measuring five inches at the shell side tapering to four inches at the inside front of the pocket, will be installed one inch down inside the pocket. The shelf will attach to the front of the pocket with hook and loop fastener tape measuring one inch by four inches. This shelf shall support the hardware above the rope in the lower portion of the pocket.

_____ Comply _____ Exception

PANT CUFF REINFORCEMENTS

The cuff area of the pants shall be reinforced with grey suede leather. The cuff reinforcement shall not be less than 2 inch in width and folded in half, approximately one half inside and one half outside the end of the legs for greater strength and abrasion resistance. The cuff reinforcement shall be double stitched to the outer shell for a minimum of two rows of stitching. This independent cuff provides an additional layer of protection over a hemmed cuff. Pants that are turned and stitched at the cuff, as opposed to an independent cuff reinforcement, do not provide the same level of abrasion resistance and shall be considered unacceptable.

_____ Comply _____ Exception

PADDED RIP-CORD SUSPENDERS & ATTACHMENT

On the inside waistband shall be attachments for the standard "H" style "Padded Rip-Cord" suspenders. There will be four attachments total – 2 front, 2 back. The suspender attachments shall be constructed of a double layer of black aramid measuring approximately ½ inch wide by 3-inches long. They shall be sewn in a horizontal position on the ends only to form a loop. The appearance will be much like a horizontal belt loop to capture the suspender ends.

A pair of "H" style "Padded Rip-Cord" suspenders shall be specially configured for use with the pants. The main body of the suspenders shall be constructed of 2 inch wide black webbing straps. The suspenders shall run over each shoulder to a point approximately shoulder blade high on the back, where they shall be joined by a 2 inch wide horizontal piece of webbing measuring approximately 8-inches long, forming the "H". This shall prevent the suspenders from slipping off the shoulders. The shoulder area of the suspenders will be padded for comfort by fully encasing the webbing with aramid batting and wrap-around black aramid.

The rear ends of the suspenders will be sewn to 2-inch wide elasticized webbing extensions measuring approximately 8-inches in length and terminating with thermoplastic loops. The forward ends of the suspender straps shall be equipped with specially configured black powder coat non-slip metal slides with teeth. Through the metal slides will be the 9 inch lengths of strap webbing "Rip-Cords" terminating with thermoplastic loops on each end. Pulling on the "Rip-Cords" shall allow for quick adjustment of the suspenders.

Threaded through and attached to the thermoplastic loops on the forward and rear ends of the suspenders will be black aramid suspender attachments incorporating two snap fasteners. The aramid suspender attachments are to be threaded through the suspender attachment loops on the inside waistband of the pants. The aramid suspender attachments will then fold over and attach to themselves securing the suspender to the pants.

Comply Exception

REVERSE BOOT CUT

The outer shell pant leg cuffs will be constructed such that the back of the leg is approximately 1 inch shorter than the front. The liner will also have a reverse boot cut at the rear of the cuff and a concave cut at the front to keep the liner from hanging below the shell. This construction feature will minimize the chance of premature wear of the cuffs and injuries due to falls as a result of "walking" on the pant cuffs. Pants that have "cut-outs" in the back panel rather than a contoured boot cut shall be considered unacceptable.

Comply Exception

RAPPELLING HARNESS LOOPS

Each pant shall have a series of 10 Harness loops around the waist and inner thighs. The loops will be constructed of a double layer of outer shell material and will be of a 2-piece design – top and bottom. The top and bottom of each loop will attach to each other with snap fasteners and FR Velcro® hook and loop tape sewn to the ends to accommodate donning of the harness. The loops will be universally located to accept a Rappelling Harness worn on the outside of the pant.

Comply Exception

THIRD PARTY TESTING AND LISTING PROGRAM

All components used in the construction of these garments shall be tested for compliance to NFPA Standard #1971 by Underwriters Laboratories (UL). Underwriters Laboratories shall certify and list compliance to that standard. Such certification shall be denoted by the Underwriters Laboratories certification label.

Comply Exception

LABELS

Appropriate warning label(s) shall be permanently affixed to each garment. Additionally, the label(s) shall include the following information.

Compliance to NFPA Standard #1971
Underwriters Laboratories classified mark
Manufacturer's name
Manufacturer's address
Manufacturer's garment identification number
Date of manufacture
Size

_____ Comply _____ Exception

ISO CERTIFICATION / REGISTRATION

The protective clothing manufacturer shall be certified and registered to ISO Standard 9001 to assure a satisfactory level of quality. Indicate below whether the manufacturer is so certified and registered by checking either "Yes" or "No" in the space provided.

_____ Yes _____ No

BETTER BUSINESS BUREAU:

The manufacturer is accredited by the Better Business Bureau, showing a commitment to ethical and principled business practices.

_____ Comply _____ Exception

WARRANTY

The manufacturer shall warrant these jackets and pants to be free from defects in materials and workmanship for their serviceable life when properly used and cared for.

_____ Comply _____ Exception

HOOK AND LOOP SUPPORT PROGRAM

Support program shall cover hook or loop tape that has begun to fray or otherwise degrade from normal wear. This program shall remain in effect for a period of five years from the original date of manufacture of the garment. This support program shall cover the repair or replacement, without charge, of any hook and/or loop on the garments produced by the manufacturer providing the garments are otherwise serviceable.

This support program does NOT cover damage from fire, heat, chemicals, misuse, accident or negligence. Failure to properly care for garments will serve to void this support program.

_____ Comply _____ Exception

SIZING BY VENDOR

Both male and female sizing samples shall be available.

_____ Comply _____ Exception

BAR-CODE/RECORD KEEPING INTERFACE

A 1 dimensional barcode, in the interleaved 2 of 5 format shall be printed on the label of each separable layer of the garment.

This barcode shall represent the serial number of the garment. The manufacturer shall be able to provide a detailed list of each asset of a drop-shipped order, and shall include the following:

- Brand
- Order Number
- Serial Number
- Style Number
- Color
- Description
- Chest/Waist Size
- Jacket/pant Length
- Sleeve Length
- Date of Manufacture
- Mark-For Data

This information shall be able to be imported into the manufacturers web-based system designed to facilitate the organization and tracking of assets in accordance with the cleaning and inspection requirements of OSHA and NFPA 1851.

_____Comply _____Exception

PPE RECORD KEEPING

The manufacturer shall make available and no-charge, a password protected data based backed website that does not care whose brand of PPE assets are being recorded. The website shall have the functionality to allow the manufacturer to import all of the pertinent data into the department's account so that the initial data entry by fire department personnel is eliminated.

The website shall allow for the department to use a barcode scanner, if desired, to scan the Interleaved 2 of 5 barcode found in the gear by going to the Search the Serial Number page in PPE record keeping program, and scanning the asset's barcoded serial number.

_____Comply _____Exception

EXCEPTIONS TO SPECIFICATIONS

Any and all exceptions to the above specifications must be clearly stated for each heading. Use additional pages for exceptions, if necessary.

COUNTRY OF ORIGIN

Jackets and Pants shall be manufactured in the United States.

Crossville Fire Department
Fire Boot Specification

Product Specification Sheet

Sizes men 5-16, half sizes ladies 5-12, half sizes

Widths Narrow, Medium, Wide

Leg Height 14 inches

Product Abstract Bunker boot, black, waterproof (to 10.5 inches measured from top of the insole), full leather, profiled rubber toe cap, large boot straps on both sides, shin protection, boot with non-slip, shock absorbing rubber outsole and machine washable insole. A booklet containing product details, antistatic information, and care instructions will be included with each pair of shoes.

Materials

Upper

- Hydrophobic, full grain cowhide, breathable, color black.
- Approx. 0.1 - 0.08 inches (2.5 – 2.7 mm) thick.
- Tested to be hydrophobic for a minimum of 120 minutes (dynamic test in the Penetrometer).
- Free of PCP, AZO and Chromium-VI.

Shaft closure

(casing & top band)

- Hydrophobic casing leather, breathable, color black.
- Approx. 0.04 – 0.05 inches (1.1 - 1.3 mm) thick.
- Tested to be hydrophobic for a minimum of 120 minutes (dynamic test in the Penetrometer).
- Free of PCP, AZO and Chrome VI.
- The casing is approx. 1.5 inch (40 mm) high.

Heel bend

- Black edging leather, minimum 0.04 – 0.05 inches (1.0 - 1.2 mm) thick.

Shin protection

- Memory foam between shaft and lining, 0.31 inches (8 mm) thick.

Pull-on loop

- Two large pull-on loops at both sides made from upper leather, strengthened with textile strip.

Padding

- Soft, reticulated foam.

Lining

- Four layer waterproof laminate with permanently welded seams, abrasion resistance, and nonwoven.
- 1st layer Thermobonded nonwoven
- 2nd layer Bicomponent membrane based on ePTFE or at least similar
- 3rd layer Functional nonwoven
- 4th layer Backing fabric: knit monofilament

Inside back strap

- A highly abrasion resistant non-woven material.

Thread

- NOMEX® threads, with a minimum thickness of 30/3, water repellent, color yellow.

Foot bed

- Moisture-absorbing insole with steel joint and anklesupport made from Texon T93 (fleece), 0.1 inch (2.5 mm) thick.

Ladder shank

- Thickness ≥ 1.4 mm, stainless, 3 ruffles, deflection at 400 lb (182 kg) acc. NFPA 1971-2007 not more than 1/4 inch (6 mm)

Insole

- Anatomically formed, nonwoven, abrasion resistant, wicks moisture away from foot, machine washable at 86 °F.

Heel counter

- Made of fibrous leather board, matching to the firefighting last.

Outsole

- Oil and fuel resistant, non-slip and non-chalky rubber shell sole, contains PU damping wedge with reinforcing metal insert, self cleaning.

Technical Information

Outsole

- Toe spring of approx. 0.38 inches (10 mm) and a heel spring of approx. 0.5 inches (12 mm) ensure a natural stride.
- Shore hardness rubber outsole Shore A 65° at 73.4 °F (tolerance ± 3).
- Main tread depth minimum 0.24 inches (5.5 mm); round tread groove base.
- Angular edging or the tread stake at the sole margin for high lateral stability.
- Light ladder heel treading in the joint area.
- Highly heat resistant connection of the rubber sole with the PU wedge and

the upper.

Steel mid sole

- Thickness ≥ 0.5 mm
- stainless
- Puncture resistance acc. NFPA 1971-2007 > 1212 N (272 lbf)
- Flex cracking resistance
 - acc. NFPA 1971-2007 > 1,000,000 Flexes
 - acc. CAN/CSA-Z195-02 > 1,500,000 Flexes

Instep flex

- System offering a very good heel adaptation of the boot to different instep heights and widths.
- With elastic insert which stretches when stepping into the boot and therefore enables the foot to get in.
- This elastic insert encompasses the foot tightly in the instep area and pushes it against the rear cap.
- During walking, a tight heel fit has to be guaranteed. The heel may not (or only at a minimum) move up and down inside the boot ("slipping" in the boot).

Heel and instep bend

- Guarantees a smooth movement when kneeling, bending, and operating a machine.
- With padded leather as instep and heel bend.
- With an equivalent puncture proof analogical to the rest of the upper in the instep area.

Pull-on loops

- With leather straps on both sides of the boots.
- At least 1 inch (25 mm) broad having a length of approx. 10 inches (25 cm).

Reflective strip

- With an at least 20 mm wide reflection strip at the outside.
- From the upper edge of the outer counter to the middle seam of the boot tube.

Toe protection cap

- Steel toe cap according to ASTM F2413-05.

Rubber toe cap

- The boot is equipped with a profiled rubber toe cap which is fixed with a seam at the end.
- The seam is in a furrow which protects it from scrubbing.

Insole

- Surface layer material must withstand a minimum of 25,600 scrubbing cycles without scrubbing through.

Climate System

- Permits air circulation with every step.
- At the upper leg height ending, there are at least 18 ventilation holes.
- Inner lining glued to upper only periodically to prevent detachment and allow full breath ability of the leather.

Quality Assurance

Every shoe is equipped with a durable, long lasting, and legible label containing company specific data as serial number, size, and production site. Each shoe has a unique code number which permits tracking of the shoes in the production company and with consumers.

Extended Wear Program

Out of warranty footwear can be completely refurbished through a resole package. This package includes any necessary replacement or repair of stitching, toe caps, and soles. Footwear will also be cleaned, deodorized, and receive new insoles. Footwear owners also have the option of a sole replacement only or a toe cap replacement only. All footwear can be re-furbished with original manufacturer parts

Waterproof quality

- Each 50th pair (and/or after each disturbance of the producing process) of welded seams must be checked using an imperviousness testing device.
- The welding seam must withstand a test pressure of 1 bar for at least 5 minutes. The test result is available upon demand.
- Daily, at least one pair of shoes is checked for its waterproof quality on a walking simulator.
- Over a period of 300,000 scrubbing cycles (approx. 24 hours) the shoe should not take on any water. Test results are available on demand. On prior agreement and on demand, technically adequate testing procedures (e.g. centrifuge) are also able to be used due to production organizational reasons.

Certification by Underwriter's Laboratories, Inc.

- NFPA 1971-2007, Standard for Protective Ensembles for Structural Fire Fighting
- CAN/CSA-Z195-2002, Standard for Protective Footwear
- ASTM F2413-05, Standard Specification for Protective Footwear

Bid Specification

Carbon Blend Fire Fighter Hood

Performance

Meets or exceeds all requirements of NFPA 1971, 2000 Edition
Labels must contain UL third party certification mark

Materials

Available in: High Temperature Carbon Blend Fabric

Bib is "squared" in front and back to lay flat against the chest and back

The front and rear "bibs" formed by the shoulder notches are approximately the same length and width.

Has a slightly shortened front "bib".

High Temperature Thread
½" Heavy-Duty Genuine Elastic

Construction

Double layer, single seam, notched-shoulder design.

Top seam must be genuine flatlock for completely flat fit. Other types of seaming, top-stitched over to appear flatlocked are not acceptable.

Gusset shall be flatlock stitched into rear of hood.

Face opening must stretch to a full 17". Face opening at rest shall be 5.6" (+0.0"/-1.0) and shall remain within tolerance after 50 consecutive donnings and doffings.

Measurements shall be consistent with NFPA 1971, 2000 Edition

When laid flat with face opening to one side, there shall be a minimum width below the face opening of 9" ($\pm 1/4$ ") and a minimum width above the face opening of 82" ($\pm 1/4$ "). The head section from top to bib seam must be a minimum of 20" ($\pm 1/4$ ").

When laid flat with face opening in front, the bib shall have flare out at the bottom to a width not less than 16" ($\pm 1/2$ "). Shoulder notches are to be at least 5 ¼" ($\pm 1/4$ ") long from bottom of hood front.

All stress points shall be "bar-tacked."

Packaging

Each hood to be individually polybagged with required end user information.

Bid Specification

NFPA Fire Fighting Glove # 1 Spec

Performance

Meets or exceeds all requirements of NFPA 1971 (2000 edition)
Federal OSHA Standard 29 CFR 1910.156/CAL OSHA Title 8 10.1 3407

Materials

Navy blue kangaroo leather palm
Leather to be double chrome tanned and treated for lasting softness and water repellency
Navy blue elkskin back
PYROTECT moisture barrier
35% Kevlar/65% Nomex lining offers superior slash resistance and protection
2-ply Nomex/Spandex knitwrist

Construction

Five finger glove, Gunn cut
A Swing Thumb style (Better than Straight or Wing thumb styles)
Seamless index finger of navy blue elkskin
Convertible cuff/knitwrist performs as either a gauntlet-style, knitwrist style or combination of both. (Ganutlet style must be worn with thumbhole knitwrist in turnout sleeve for NFPA compliance.)
Extra-wide cuff opening, constructed with a one-inch **leather retaining band** sewn inside the knitwrist
Two-ply Nomex/Spandex knitwrist
Navy blue elkskin anti-slash strip on palm and around the thumb side, extending over the first knuckle
Shell, lining and moisture barrier shall extend 3" beyond the wrist crease
Liner/Moisture Barrier
Moisture barrier tabs are stitched to the leather shell
Lockstitched seams – Minimum 8 stitches per inch with heat resistant Kevlar thread
Leather seam welt between thumb and index finger
Elastic snugger band on back
Leather hanger loops

Sizes

Available in seven (7) sizes: Regular: XS, S, M, L, XL, XXL and XXXL

Packaging

Each pair of gloves to be individually polybagged with required end user information.

PUBLIC NOTICE

TITLE VI OF THE 1964 CIVIL RIGHTS ACT

“No person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.”

The City of Crossville provides benefits and services such as police protection, fire protection, water service, sewer service, sanitation service, infrastructure needs, and other related municipal services. The City also provides funds to certain non-profit organizations.

Anyone who believes that an agency or local government receiving the federal funding mentioned above has discriminated against someone on the basis of race, color or national origin has a right to file a complaint within 180 days of the alleged discrimination.

Sally Oglesby, City Clerk
Title VI Coordinator

Please sign and return to the City of Crossville verifying that your company is in compliance with the above Title VI, 1964 Civil Rights Act.

Authorized Signature

Company

Print Name

Please return to: City of Crossville
 392 N. Main Street
 Crossville, TN 38555