THE CITY OF EDINBURG

BID REQUEST
ADDENDUM NUMBER ONE (1)

DATE: NOVEMBER 06, 2015

RE: BID NO. 2016-36 – PERSONAL PROTECTIVE EQUIPMENT

OWNER: CITY OF EDINBURG

TO: ALL BIDDERS, HOLDERS OF SPECIFICATIONS, AND ALL INTERESTED PARTIES TO THE CITY OF EDINBURG

All Addenda issued in respect to this project shall be considered official changes to the original bid documents and shall become a part of the Contract documents.

SPECIFICATIONS ADDENDUM ITEM AS SPECIFIED BELOW:

CLARIFICATION: SPECIFICATIONS WERE IMPROPERLY LABELED AND SPECIFICATIONS #A WERE ERRONEOUSLY LEFT OUT.

REPLACE: SPECIFICATIONS PAGES 9-24 WITH THE CORRECT SPECIFICATIONS LABLED SPECIFICATIONS #A AND SPCIFICATIONS #B.

PLEASE ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED BELOW AND FAX BACK TO MS. LORENA FUENTES, PURCHASING AGENT AT (956) 383-7111 OR VIA EMAIL TO lfuentes@cityofedinburg.com. PLEASE INCLUDE THIS FORM IN YOUR BID PROPOSAL.

NAME: _____ TITLE: _____

COMPANY: _____

If you have any questions or require additional information, do not hesitate to contact Ms. Lorena Fuentes, Purchasing Agent at (956) 388-1895.

Lorena Fuentes

Lorena Fuentes, Purchasing Agent

415 W. University Drive • P.O. Box 1079 • Edinburg, Texas 78540
Phone (956) 388-8204 • Fax (956) 383-7111

EDINBURG, TX
LION® V-FORCE™ COAT AND PANT
PROTECTIVE CLOTHING SPECIFICATION
NFPA 1971, 2013 EDITION

SCOPE: 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.

_____COMPLIANT _____EXCEPTION

STANDARDS: 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, OHSA 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 certification organization shall denote certification.

_____COMPLIANT _____EXCEPTION

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

_____COMPLIANT _____EXCEPTION

COMPOSITE PERFORMANCE: The garment composite, consisting of the outer shell, moisture barrier and thermal liner, shall provide a Thermal Protective Performance (TPP) of not less than 43 when tested in accordance with NFPA 1971 standard.

_____COMPLIANT _____EXCEPTION

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

_____COMPLIANT _____EXCEPTION

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

_____COMPLIANT _____EXCEPTION

OUTER SHELL MATERIAL: +/- 7.0 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).

_____COMPLIANT _____EXCEPTION

MOISTURE BARRIER MATERIAL: CROSSTECH® 3-Layer membrane laminated between a NOMEX® pajama check and a NOMEX® woven fabric; weighing 7.0 oz./sq. yd.

_____COMPLIANT _____EXCEPTION

THERMAL LINER MATERIAL: The thermal liner shall be comprised of Glide™ high-lubricity, stress reducing, filament/spun face cloth weighing 3.6 oz/sq/yd. The Kevlar 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. Nomex spun yarns, with superior wicking characteristics, shall be used to promote moisture management within the garment. The Glide™ 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.).

_____COMPLIANT _____EXCEPTION

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

_____COMPLIANT _____EXCEPTION

REFLECTIVE TRIM: All trim shall be sewn with four rows lockstitch 301, minimum six stitches/inch for most secure trim attachment. Trim shall be 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: **Viz-a-V 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; two 3" V shaped vertical strips shall be set at an angle from hem trim to back chest trim of the coat; one strip set vertical down flap of fallen man harness.

Pant trim shall be applied as follows: One strip set full circumference around the bottom of the cuff 2"/3" from the bottom cuff; one strip extending from top of knee centered at outseam position to top of cuff trim.

_____COMPLIANT _____EXCEPTION

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

_____COMPLIANT _____EXCEPTION

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

Do Not Remove This Label

THIS STRUCTURAL FIREFIGHTING PROTECTIVE GARMENT MEETS THE GARMENT REQUIREMENTS OF NFPA 1971, 2013 EDITION

MADE IN THE U.S.A.

_____COMPLIANT _____EXCEPTION

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

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

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

_____COMPLIANT _____EXCEPTION

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.

_____COMPLIANT _____EXCEPTION

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

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

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

(c) Inspection:
- Inspection frequency and details.

(d) Don/Doff:
- Donning and doffing procedures.

- Sizing and adjustment procedures.
- Interface issues.

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

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

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

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

_____COMPLIANT _____EXCEPTION

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

_____COMPLIANT _____EXCEPTION

COUNTRY OF ORIGIN: The Garments shall be manufactured in the United States.

_____COMPLIANT _____EXCEPTION

V-FORCE™ BI-SWING COAT

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 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. 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. (29" or 32" female).

_____COMPLIANT _____EXCEPTION

MOISTURE BARRIER/THERMAL LINER CONSTRUCTION: Design shall be compatible with the outer shell so that the liner does not buckle, pull, or otherwise restrict body motion. The left and right fronts of the moisture barrier/thermal liner shall be attached to the facings at the front closure of the outer shell. The moisture barrier/thermal liner shall be secured to 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.

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

The 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.

_____COMPLIANT _____EXCEPTION

MOISTURE BARRIER/THERMAL LINER ATTACHMENT: The moisture barrier/thermal liner shall be completely detachable from the outer shell for ease of cleaning by the use of hook and loop, zippers, and snaps. There shall be a thermoplastic 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.

_____COMPLIANT _____EXCEPTION

COAT LINER INSPECTION SYSTEM: There shall be a 10" 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.

_____COMPLIANT _____EXCEPTION

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 multiple pieces ¾" hook along top edge, and EXTRA HIDDEN SNAPS for liner attachment.

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 1.5" 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. The collar shall be attached to the liner facing using 3/4" hook. Collar shall be of such design so as not to interfere with SCBA face masks, or helmet.

_____COMPLIANT _____EXCEPTION

DRAG RESCUE DEVICE (DRD): The Fire Fighter Recovery Harness™ shall be constructed of a one and one-half inch wide KEVLAR® strap that shall be installed between the outer shell and the thermal liner. This harness shall have a hand loop (16" in circumference) that exits the outer shell through a 2" polymer coated aramid reinforced slot on the back of the coat just below the collar and is held in place by means of a piece of 1.5" x 2" loop on the strap and a piece of 1" x 3.5" loop attached to the outer shell. This strap is then secured under a 2.5" x 4.25" flap that is sewn in at the neck /collar area. One piece of 1" x 3.5" hook shall be set horizontally on shell to align with one piece of 1" x 3.5" loop set horizontally to the underside of the flap. The harness is also held in proper alignment by means of a piece of 2" x 2" 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 inside the coat in the shoulder cap area to keep straps in proper position for use.

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.

_____COMPLIANT _____EXCEPTION

HANGER LOOP: An external hanger loop constructed of a double layer of outer shell material and reinforced with two 42-stitch bartacks shall be provided on the outside of the coat at the collar seam. It shall be designed to

provide long service and shall not tear or separate from the coat when the coat is hung by the hanger loop, loaded evenly with a weight of 80 lbs. and allowed to hang for one minute.

_____COMPLIANT _____EXCEPTION

THERMAL REINFORCED YOKE: A layer of Semper Dri™ (3.0 oz./sq. yd. Teflon® treated Chambray (NOMEX® spun) face cloth quilted to (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 and raglan sleeve of the thermal liner across the upper back and shoulder approximately 7".

_____COMPLIANT _____EXCEPTION

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

_____COMPLIANT _____EXCEPTION

V-FIT™ ELBOW: 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.

_____COMPLIANT _____EXCEPTION

SLEEVE WELL: A combination 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)) and three layer CROSSTECH® 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 of the outer shell cuff. This method of combination liner attachment shall prevent any gaps from occurring between the combination liner and sleeve well during a full range of motion. The combination liner shall extend to within 1" of the sleeve end.

_____COMPLIANT _____EXCEPTION

WRISTLETS: An internal wristlet shall consist of a 2-ply knit of 48% NOMEX®/48% KEVLAR® and 4% Spandex for superior recovery. Wristlet to be combination of natural and bronze 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.

_____COMPLIANT _____EXCEPTION

CUFFS: The extended cuff of the sleeve shall be reinforced with a binding of black poly-coated aramid 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.

_____COMPLIANT _____EXCEPTION

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 extending from collar to hem.

_____COMPLIANT _____EXCEPTION

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.

_____COMPLIANT _____EXCEPTION

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.

_____COMPLIANT _____EXCEPTION

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.

_____COMPLIANT _____EXCEPTION

HANDWARMER POCKETS: Pair 9" x 9" Semi-bellow and handwarmer pocket combination that expands by means of side and bottom gussets to a thickness of 2" in back only and 0" in front. The pockets 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 lined 4.5" up outside pocket with poly coated aramid. Handwarmer pocket shall be lined inside with Semper Dri™ thermal liner material. Pocket and flap shall be set with stitch 301, seam Ssb-2 with each corner of pocket opening and top corners of flap reinforced with bar tacks for additional strength. Drainage of moisture to be provided by brass eyelets. Each pocket 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.

_____COMPLIANT _____EXCEPTION

RADIO POCKET: One 3.5" wide x 9" deep full bellows radio pocket that expands by means of side and front gussets to a thickness of 2" in front and back. Pocket and flap shall be set with stitch 301, seam Ssb-2 with the top and bottom pocket corners and top corners of flap reinforced with a minimum 42-stitch bar tack. A brass eyelet shall provide drainage of moisture. Pocket flaps shall be 4.5"x 5". Pocket shall be fully lined all 3 sides inside pocket with polycotton lining. Pocket flap shall close to the pocket top using 1 piece of 1"x 2" loop on pocket horizontally and 1 piece of 1"x 2" hook on flap vertically. Pocket flap shall include a notch on the flap to accommodate an antenna.

_____COMPLIANT _____EXCEPTION

MIC TAB: There shall be a 1" x 3" self-fabric mic tabs with poly-coated aramid inside. Mic tab shall be bartacked to the shell on each end on the left chest above the radio pocket.

_____COMPLIANT _____EXCEPTION

FLASHLIGHT HOLDER: There shall be a 1.25"x 8.5" self fabric flashlight holder x-stitched to the outer shell of coat on the right chest. Strap shall have 1"x 2" hook applied to one end of the strap and 1"x 2" loop applied to opposite end of strap. There shall be a 703 snap-hook applied to outer shell 5" above the self fabric strap. It shall be securely fastened to the coat by means of a self fabric strap looped through the end of the 703 hook and bartacked to the outer shell.

_____COMPLIANT _____EXCEPTION

LETTER PATCH: There shall be one 1.5"x18" contoured 2-layer self-fabric one-line Letter Patch attached to hang from back hem via hook & loop and corner snaps.

_____COMPLIANT _____EXCEPTION

LETTERING: All lettering shall be Lime/Yellow Scotchlite. Names (1ST INITIAL + LAST) shall be sewn to the hanging patch using 3" (2" if required for fit).

_____COMPLIANT _____EXCEPTION

LETTERING: All lettering shall be Lime/Yellow Scotchlite. **EDINBURG** shall be sewn to the yoke using 3".

_____COMPLIANT _____EXCEPTION

TEXAS FLAG: There shall be a 2.5x4.25" Texas State Flag patch sewn to the coat.sewn to the coat on the upper left sleeve.

_____COMPLIANT _____EXCEPTION

V-FORCE™ PANT WITH BELT

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

_____COMPLIANT _____EXCEPTION

ESCAPE BELT: There shall be 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 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.

_____COMPLIANT _____EXCEPTION

BELT LOOPS: 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.

_____COMPLIANT _____EXCEPTION

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 +/- 6.0-6.8 oz./sq. yd)). The waist of the moisture barrier/thermal liner shall be secured to the waist of the outer shell such that when donning the pant a leg may not be accidentally caught between the outer shell and its inner linings along the waist and between the legs of the pant. For added thermal protection in the knee, an additional layer of uninterrupted 1/8" thick, fire resistant closed-cell foam shall be positioned between the moisture barrier and thermal liner. The moisture barrier shall be completely sewn to a 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.

_____COMPLIANT _____EXCEPTION

MOISTURE BARRIER/THERMAL LINER ATTACHMENT: The moisture barrier/thermal liner shall be completely detachable from the outer shell for ease of cleaning by using snaps and hook and loop. Eight evenly

spaced snaps shall secure the liner to the integral waistband; two snaps shall be set in leather leg tabs at each leg end and hook and loop on each side of fly facing.

_____COMPLIANT _____EXCEPTION

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

_____COMPLIANT _____EXCEPTION

STORM FLY/CLOSURE: The outer shell shall have a sewn on overlapping fly front running the full length of the fly on the left side. The flap shall not be less than 2.5" wide at the waistband. The bottom of the fly shall be reinforced with 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. Velcro stitching will be double rows. Additionally, one snap shall be positioned at the inside top of the fly. Pant closure shall be provided by a thermo plastic zipper.

The storm fly shall be outer shell material, lined with a 4." strip of CROSSTECH® (Type 2F) moisture barrier material.

_____COMPLIANT _____EXCEPTION

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.

_____COMPLIANT _____EXCEPTION

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.

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

_____COMPLIANT _____EXCEPTION

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 pants. 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.

_____COMPLIANT _____EXCEPTION

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, two layers of uninterrupted 1/8" thick, fire retardant closed-cell foam and one layer of silicone shall be also be positioned between the reinforcement layer and outershell.

_____COMPLIANT _____EXCEPTION

CUFFS: The cuff area of the pant shall be reinforced with a binding of black polymer coated aramid not less than 2" in total width for greater strength, abrasion resistance, and thermal protection. In addition a 3" x 3 ½" 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.

_____COMPLIANT _____EXCEPTION

BOOT CUT: 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.

_____COMPLIANT _____EXCEPTION

FULL BELLOWS POCKET: There shall be a 10" wide x 10" deep outside full bellows pocket that expands by means of side and bottom gussets to a thickness of 2" in front and back set to the left thigh. Pocket shall be fully lined on three sides with KEVLAR® twill on inside of pocket. Pocket and flap shall be set with stitch 301, seam Ssb-2 with the top and bottom pocket corners and top corners of flap reinforced with bar tacks for additional strength. Drainage of moisture to be provided by brass eyelets. Pocket flap shall be 11"x 5. A hook and loop fastener closure system shall be set with 1.5" x 10" loop fastener horizontally on the pocket and (2) pieces of 1.5" x 2.75" hook fastener vertically on the underside of the flap.

_____COMPLIANT _____EXCEPTION

FULL BELLOWS "TOOL" POCKET: 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 set to the right thigh. Pocket 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.

_____COMPLIANT _____EXCEPTION

SUSPENDERS

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.

GENERAL SPECIFICATIONS
PROTECTIVE JACKET AND TROUSERS
FOR STRUCTURAL FIRE FIGHTING

The City of Edinburg reserves the right to accept or reject any or all bids, based on what is more favorable to the City of Edinburg. This bid may also be used for any city or community in Hidalgo, Cameron, Starr, Willacy and Zapata counties, if they so desire.

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 (2007 revision) and OSHA for structural fire fighters protective clothing.

_____Comply _____Exception

OUTER SHELL MATERIAL - JACKETS AND TROUSERS

The **"PBI® MATRIX"** outer shell shall be constructed of PBI®/Kevlar® blend of spun fibers and 400 denier High Strength Filament fibers in a "Matrix Technology" with an approximate weight of 7.5 oz. per square yard. The shell material must be treated with **SST™ (SUPER SHELLTITE)** which is a durable water-repellent finish that also enhances abrasion resistance. Color of garments to be natural/gold. **Bids offering this shell material without the SST™ will not be considered.**

_____Comply _____Exception

THERMAL INSULATING LINER - JACKET AND TROUSERS

The thermal liner shall be constructed of **"QUANTUM® 3D"**; a 100% Nomex® spun/filament Goldcheck™ face cloth with Wickwell™ Plus finish quilted to one flat layer and one three dimensional layer of Nomex®/Kevlar® spunlace with a finished weight of approximately 7.7 oz. per square yard. 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 bound around its perimeter with Bias-Cut Neoprene jacketed cotton/polyester binding. The thermal liner shall be attached to the moisture barrier. Further mention of "Thermal Liner" in this specification shall refer to this section.

_____Comply _____Exception

MOISTURE BARRIER - JACKETS AND TROUSERS

The **"CROSSTECH®" TYPE 4A** ePTFE (expanded polytetrafluoroethylene, for example Teflon) moisture barrier is engineered using an E-89 substrate and BHA Technologies bicomponent ePTFE membrane. The moisture barrier material shall meet all moisture barrier requirements of NFPA 1971-2007 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 along the edges with neoprene-jacketed cotton/polyester and secured with double stitching. 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

INSPECTION PORT

NFPA 1851 2008 Edition – The thermal barrier and vapor barrier shall have inspection ports establish on the jacket and pant unit to facilitate inspection of each layer without removal of any stitches. State the type and location of inspection port.

_____Comply _____Exception

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

The thermal liner and moisture barrier shall be completely removable from the jacket shell. Two strips of 5/8 inch wide flame resistant hook and pile fastener tape shall secure the thermal liner/moisture barrier to the outer shell along the length of the neck line under the collar (see Collar section). The remainder of the thermal liner/moisture barrier shall be secured with a minimum of four snap fasteners appropriately spaced on each jacket facing and four snap fasteners at each sleeve end.

The thermal liner and moisture barrier shall be completely removable from the trouser 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 two snap fasteners per leg.

_____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, 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. There shall be no joined stitching in midseam. All major A outer shell structural seams, major B structural liner seams, shall have a minimum of 8 to 10 stitches per inch.

_____Comply _____Exception

JACKET CONSTRUCTION

BODY

The body of the shell and AXTION liner system 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.

_____Comply _____Exception

DRAG RESCUE DEVICE (DRD)

A Firefighter Drag Rescue Device shall be installed in each jacket. The ends of a 1.5 inch wide Kevlar® strap 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 a Velcro strap. The access port will be covered by an outside flap with beveled corners designed to fit between the shoulder straps of an SCBA. The flap will have a compliant reflective patch sewn to the outside to clearly identify the feature as the DRD (Drag Rescue Device).

_____Comply _____Exception

SEPARATING LINER SYSTEM (JKT)

The thermal liner and moisture barrier shall be completely removable from the jacket shell. Two strips of 5/8 inch wide flame resistant hook and pile fastener tape shall secure the thermal liner/moisture barrier to the outer shell along the length of the neckline under the collar. This opening shall run the full length of the collar for the purpose of inspecting the inner surfaces of the coat liner system. The remainder of the thermal liner/moisture barrier shall be secured with a minimum of four snap fasteners appropriately spaced on each jacket facing and four snap fasteners at each sleeve end. The outside perimeter of the AXTION liner moisture barrier and thermal liner layers shall be bound together along the side and bottom edges with a Bias-Cut Neoprene coated cotton/polyester binding for a finished appearance that prevents fraying and wicking of contaminants.

_____Comply _____Exception

AXTION SLEEVES

The sleeves shall be of two piece construction, having an upper and a lower sleeve. The sleeve seams shall be of a double needle seam construction and shall be contoured to follow the natural flex of the arm at rest. 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. On the moisture barrier and thermal liner, the system will consist of two darts, rather than pleats, to allow added length in the undersleeve. 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 coat rise.

_____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. 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.

_____Comply _____Exception

SLEEVE CUFF REINFORCEMENTS

The sleeve cuffs shall be reinforced with black suede leather. The cuff reinforcements shall not be less than 2 inches 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.

_____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. The wristlet shall be sewn to the end of the liner sleeves. FR Neoprene coated cotton/polyester moisture barrier material shall line the inside of the sleeve shell from the cuff to a point approximately 5 inches back, where it is double stitched to the shell and then extending toward the cuff forming the sleeve well. The Neoprene sleeve well shall form a cuff end that shall be elasticized providing a snug fit at the wrist and covering the knit wristlet on the liner sleeve. The elasticized sleeve well shall include an adjustable VELCRO take-up strap. The take-up strap will allow the wearer to maintain a comfortable proper fit and interface at the wrist area.

This sleeve well configuration serves to prevent water and other hazardous elements from entering the sleeves when the arms are raised and reduces the possibility of steam burns around the wrist. Four NOMEX® 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. This configuration will ensure there is no interruption in protection between the sleeve liner and wristlet.

_____Comply _____Exception

COLLAR & FREE HANGING THROAT TAB

The collar shall consist of four-layer construction and be of two-piece design. The collar shall have a minimum of 3 rows of quilting. The outer layers shall consist of outer shell material, with two-layers of specified moisture barrier sandwiched between (see Moisture Barrier section). The rear inside ply of moisture barrier shall be sewn to the collar's back layer of outer shell at the edges only. The forward inside ply of moisture barrier shall be sewn to the inside of the collar at the edges only. The multi-layered configuration shall provide protection from water and other hazardous elements. The collar shall be of two piece design with the left and right halves of all component materials joined in the center by stitching, thereby permitting the collar to retain its proper shape and roll. The collar shall be minimum 3 1/2 inches high and graded to size. The leading edges of the collar shall extend up evenly from the leading edges of the jacket front body panels so that no gap occurs at the throat area. The collar's back layers of outershell and moisture barrier shall be joined to the body panels with two rows of stitching. Inside the collar, above the rear seam where it is joined to the shell shall be a strip of 5/8-inch wide FR hook fastener tape running the full length of the collar. The collar's front layers of moisture barrier and outershell shall have an additional strip of 5/8 inch wide hook fastener tape stitched to the inside lower edge and running the full length of the collar. These two inside

strips of 5/8 inch wide FR hook fastener tape sewn to the underside of the collar shall engage corresponding pieces of flame resistant pile fastener tape at the front and back neck area of the liner system. A self material fabric hanger loop shall be sewn top of 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 1.5 inch long piece of Nomex® twill webbing. The throat tab shall be secured in the closed and stowed position with flame resistant hook and pile fastener tape. The flame resistant hook and pile 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 pile fastener tape shall be sewn vertically to the inside of each end of the throat tab. Corresponding pieces of FR hook fastener tape measuring 1 inches 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 2 inch piece of FR hook fastener tape shall be sewn horizontally to the inside of the throat tab immediately under the 2 inch by 3 inch pieces of FR pile fastener tape. The collar closure strap shall fold in half for storage with the FR pile fastener tape engaging the FR 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

LINER SHOULDER AND UPPER BACK THERMAL ENHANCEMENT

An 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 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 and from the juncture of the collar down the back to a depth of 7 1/2 inches. 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.

_____Comply _____Exception

UPPER BACK REINFORCEMENT

An additional layer of outer shell material shall be used to reinforce the upper back area of the coat. The additional shoulder reinforcement layer shall also serve to increase thermal insulation to the upper back area. This reinforcement layer shall extend from shoulder seam to shoulder seam, and from the juncture of the collar and back panel to a depth of 7 1/2 inches. The upper back reinforcement layer will be double stitched to the back body panel with Nomex® thread.

_____Comply _____Exception

AXTION BACK

The jackets shall include inverted pleats to afford enhanced mobility and freedom of movement in addition to that provided by the AXTION sleeves. The outer shell shall have two inverted pleats (one each side) installed on either side of the back body panel. The inverted pleats shall begin at top of each shoulder and extend vertically down the sides of the jacket to the hem. Maximum expansion of the pleats shall occur at the shoulder area and taper toward the hem.

The thermal liner shall have a single inverted pleat located at the upper middle of the back, corresponding to the added length in the shell provided by the AXTION Back pleats. It will be designed to expand with the outer shell pleats to provide maximum expansion.

The moisture barrier shall be designed with darts corresponding to the added length in the shell provided by the AXTION Back pleats. The darts are positioned at the shoulder blades of the moisture barrier, outside of the SCBA straps, and work together with the outer shell and the thermal liner pleats in the AXTION back providing maximum expansion.

_____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 2 1/2 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. 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 3 1/4 inches wide and 24 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 (zipper and hook & dee rings) a 22 inch size #10 heavy duty high-temp polymer zipper on the jacket fronts and hook and dee rings on the storm flap. The teeth of the zipper shall be mounted on Nomex® cloth and shall be sewn into the respective jacket facings. The zipper stop shall be "pressed", not molded, insuring the highest quality with increased durability. The storm flap shall close over the left and right jacket body panels and shall be secured by means of four non-ferrous inward facing hook and dee rings. The dee rings shall be secured to the leading edge of the storm flap with two rivets. The rivets shall be reinforced on the underside of the storm flap with leather. The dee rings shall be spaced along the storm flap. Four inward facing hooks shall be attached to the left front body panel with three rivets for each hook. The rivets shall be reinforced on the inside of the body panel with a single circular piece of leather for each hook. The inward facing hooks shall be positioned in such a manner that they engage the dee rings when the storm flap is closed over the front of the jacket.

_____Comply _____Exception

CARGO/HANDWARMER EXPANSION (BELLOWS) POCKETS

Each jacket front body panel shall have a 2 inch deep by 8 inch wide by 8 inch high expansion pocket double stitched to it and shall be located such that the bottom 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 lower half of the pocket shall be reinforced with an extra layer of outer shell material 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 1/2 inch wider than the pocket. The upper pocket corners and pocket flaps shall be reinforced with bartacks. The pocket flaps shall be closed by means of flame resistant hook and pile fastener tape. Two pieces of 1 1/2 inch by 3 inch FR hook fastener tape shall be installed vertically on the inside of each pocket flap (one piece on each end). Two corresponding pieces of 1 1/2 inch by 3 inch FR pile 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

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 coat, 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 1/4 inch wider than the pocket. The pocket flap shall be closed by means of flame resistant hook and pile fastener tape. A 1 1/2 inch by 3 inch piece of FR hook fastener tape shall be installed vertically on the inside of the pocket flap beginning at the center of the bottom of the flap. A 1 1/2 inch by 3 inch piece of FR pile 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 moisture barrier material to ensure that the radio is protected from the elements. The moisture 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 measure approximately 3 inches deep by 3.5 inches wide by 9 inches high and shall be installed on the left chest.

Note: (radio pocket over 6 inch in height requires trim)

_____Comply _____Exception

MICROPHONE STRAPS(2)

A strap shall be constructed to hold a microphone for a portable radio. It shall be sewn to the coat at the ends only. One microphone strap shall be mounted above the radio pocket and shall be constructed of double layer outer shell material. An additional microphone strap constructed of double layer outer shell material will be sewn high on the left chest near the shoulder.

_____Comply _____Exception

LARGE DETACHABLE BREATHING APPARATUS FACE MASK POUCH

An oval shaped pouch measuring approximately 4 inches deep by 9 inches wide by 15 inches high shall be constructed of outer shell material. Two metal drain eyelets shall be installed in the bottom of the pouch. The pouch closure shall consist of a heavy-duty zipper mounted on the left side of the pocket (as oriented to the wearer). The pouch shall be completely detachable from the coat and shall accommodate a breathing apparatus facemask. A 1-inch loop, constructed of outer shell material, shall be sewn to the top of the pouch. A 1-inch diameter dee ring shall be captured within the loop. An inward facing safety hook shall be riveted to a leather strap approximately 2 inches in length and of double thickness. The strap and safety hook shall be mounted vertically to the front of the coat with the safety hook in the down position, and shall engage the dee ring on the pouch. Flame resistant hook and pile fastener tape shall further secure the pouch to the coat to keep it from swinging. 2 inch by 5-inch FR hook fastener tape shall be sewn horizontally to the back of the pouch. A corresponding piece of 2 inch by 5-inch FR pile fastener tape shall be sewn to the front of the coat and positioned to engage the hook fastener tape. The detachable pouch shall be mounted on the right chest.

_____Comply _____Exception

RETROREFLECTIVE FLUORESCENT TRIM

The retroreflective fluorescent trim shall be lime/yellow 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 (2007 edition) 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 immediately below the upper back reinforcement layer, two vertical stripes on the back (one on each side) beginning at the bottom of the jacket and extending up to the upper back trim stripe. *(This trim package must be ordered in combination with the "Upper Back Reinforcement" of outer shell material.)*

_____Comply _____Exception

REINFORCED TRIM STITCHING

The trim stitching shall be reinforced with a strip of 3/32-inch wide flame resistant cording material. The cording shall be sewn to the top surface of the trim at the edges during installation of the retroreflective fluorescent trim on the garment. The cording provides a bed for the stitching and affords extra protection to the stitching from abrasion. This action will help to significantly reduce trim separation from the garment due to stitching failure from abrasion.

_____Comply _____Exception

SEWN ON RETROREFLECTIVE LETTERING

Each jacket shall have 3" lime/yellow Scotchlite lettering on Row A reading: EDINBURG (2" letters acceptable)

_____Comply _____Exception

LETTER PATCH

Hanging Letter Patch
Lettering on Row G will be on a Hanging letter Patch. The Hanging letter patch shall be constructed of a double layer of black Matrix shell material. The letter patch will attach to the rear inside hem of the jacket with a combination of snap fasteners and FR hook & loop fastener tape (e.g. Velcro).

_____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.

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 60. Generalized sizing, such as small, medium, large, etc., will not be considered acceptable.

_____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

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 an opening at the top waist of each pant. This opening shall run approximately 10 inches along the front top right perimeter of the waist for the purpose of inspecting the integrity of the pant liner system. When installed into the outer shell the Liner Access Opening will be covered and protected by the overlap of the 2-inch independent waistband of the pant outer shell.

_____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 NOMEX 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 NOMEX/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

KEVLAR BELT WITH BELT LOOPS

Each pant shall include a 1 3/4" wide belt constructed of KEVLAR webbing material with a zinc-plated steel belt buckle serving as the exterior primary positive locking closure. This buckle shall also provide a quick-release mechanism for donning and doffing.

_____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 by 10 inches long 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 by 10 inches long, 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 2 inch wide piece of loop VELCRO 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 2 inch wide by 9 inch long hook VELCRO tape shall be quadruple stitched to the outside right front body panel securing the fly in a closed position.

Appropriate male and female snap VELCRO 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

INTERNAL SEAT HARNESS

The internal harness shall be an NFPA 1983 certified Class II harness system, comprised of a 1 ¾" Kevlar webbing waist belt, with a zinc-plated steel belt buckle that serves as the pants positive closure. Attached to the waist belt are a left and a right 2" Kevlar webbing leg loop, designed to be installed on each separate leg of the liner on the inside of the outer shell. Additionally the harness shall have attachment loops located on either side of the steel buckle, which thread through slots in the outer shell. When not in use, these attachment loops are held in place with hook and loop, but are designed to receive a carabineer when the system is used as a harness.

_____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 NOMEX measuring approximately 1/2 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 strap webbing. 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 padded for comfort.

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 non-slip metal slides. 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 NOMEX suspender attachments incorporating two snap Fasteners. The NOMEX suspender attachments are to be threaded through the suspender attachment loops on the inside waistband of the pants. The NOMEX suspender attachments will then fold over and attachment to themselves securing the suspender to the pants.

_____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

EXPANSION (BELLOWS) POCKETS (Left)

One 2" deep x 10" wide x 10" bellows pockets shall be placed over the outer leg seams at thigh level. The pockets shall be sewn to the pant with two rows of lock stitching and shall provide two brass eyelets, installed at the bottom of each pocket, for water drainage. Each pocket shall be reinforced with an additional layer of outer shell material sewn to the inside. The pocket flaps shall be rectangular in shape, constructed of two layers of outer shell material and double stitched to the outer shell. One piece of 1 ½ inch by 3 inch FR hook VELCRO tape on the inside of each pocket flap on each side. One piece of corresponding 1 ½ inch by 3 inch FR pile VELCRO tape shall be installed horizontally on the outside of each side of pocket near the top and positioned to engage the hook VELCRO tape. Each pocket flap shall be reinforced with bartacks at the uppermost corners.

_____Comply _____Exception

EXPANSION (BELLOWS) POCKETS (Right)

One 2" deep x 10" wide x 10" bellows pockets shall be placed over the outer leg seams at thigh level. The pockets shall be sewn to the pant with two rows of lock stitching and shall provide two brass eyelets, installed at the bottom of each pocket, for water drainage. Each pocket shall be reinforced with an additional layer of outer shell material sewn to the inside. The pocket flaps shall be rectangular in shape and measure approximately 6.5" by 11.5", constructed of two layers of outer shell material and double stitched to the outer shell. One piece of 1 ½ inch by approximately 4.5 inch FR hook VELCRO tape on the inside of each pocket flap on each side and one in the middle. One continuous piece of corresponding approximately1 ½ inch by 8.5 inch FR pile VELCRO tape shall be installed horizontally on the outside of the side of pocket near the top and positioned to engage the hook VELCRO tape. Each pocket flap shall be reinforced with bartacks at the uppermost corners. Inside the pocket a strap measuring 1.5-inches by 12 inches shall run the full vertical height of the pocket where it will secure at the top with Velcro. A second strap measuring 1-inch by 4-inches shall run horizontally and attach at one end with Velcro. The straps are specially designed to secure the contents of the pocket and allow for quick release. Divider to be determined.

_____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. Two expansion pleats measuring approximately 1" deep, shall be installed on each sides of the legs along both the inseam and outseam in the knee area. 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 liner system shall be constructed with four darts 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). Each dart will be approximately 2 inches long. The darts in the liner provide a natural bend at the knee. The 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

An additional layer of specified thermal liner and moisture barrier material will be sewn to the knee area of the liner system for added protection and increased thermal insulation at contact points. 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.

_____Comply _____Exception

KNEE REINFORCEMENTS

The knee area shall be reinforced with black suede leather. The knee reinforcement shall be slightly offset to the inside of the leg to insure proper coverage when bending, kneeling and crawling. The knee reinforcements shall measure 10 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.

_____Comply _____Exception

INTERNAL KNEE PADDING (Silizone™)

The trousers shall have replaceable padding on the inside of the outer shell in the knee area contained in a special pocket. The pocket shall be constructed of black nomex material measuring approximately 8 inches wide by 10 inches high. It shall be sewn to the inside of the outer shell in the knee area on the bottom and two sides. The top of the pocket shall be open to accept the padding material, which will be inserted into the pocket. The padding shall consist of one layer measuring approximately 6.25 inches x 9.25 inches of Silizone™.

_____Comply _____Exception

PANT CUFF REINFORCEMENTS

The cuff area of the pants shall be reinforced with grey suede leather. The cuff reinforcements (suede only) shall not be less than 2 inches in width and folded in half, approximately one half inside and one half outside the end for greater strength and abrasion resistance. The cuff reinforcement shall be double stitched to the sleeve end.

_____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.

_____Comply _____Exception

PANT LEG WATER DAM

The pant legs shall be equipped with a water dam at the boot interface. FR Neoprene coated cotton/polyester moisture barrier material shall be sewn to the inside of the leg of the outer shell approximately 3 inches from the cuff. The loose end shall be elasticized to provide a snug fit at the boot. The Neoprene moisture barrier material shall also line the inside of the leg of the outer shell from the cuff to a point approximately 3 inches up, where it joins the water dam, and is stitched to the shell. This water dam configuration serves to inhibit water penetration at the boot interface.

_____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 (2007 revision) in 3 inch lime/yellow Triple Trim (L/Y borders with silver center).

_____Comply _____Exception

REINFORCED TRIM STITCHING

The trim stitching shall be reinforced with a strip of 3/32 inch wide FR cording material. The cording shall be sewn to the top surface of the trim at the edges during installation of the retroreflective fluorescent trim on the garment. The cording provides a bed for the stitching and affords extra protection to the stitching from abrasion. This action will help to significantly reduce trim separation from the garment due to stitching failure from abrasion.

_____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 56. 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

THIRD PARTY TESTING AND LISTING PROGRAM

All components used in the construction of these garments shall be tested for compliance to NFPA Standard #1971 (2007 revision) 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 - 2007 edition
Underwriters Laboratories classified mark
Manufacturer's name
Manufacturer's address
Manufacturer's garment identification number
Date of manufacture
Size
Fiber contents

_____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

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.

The Garments shall be manufactured in the United States.