1 - GENERAL SPECIFICATIONS

SCOPE

This document specifies the design and materials used to manufacture coats and pants to be worn during STRUCTURAL FIREFIGHTING as covered by NFPA 1971. The protection offered by the garment covers the lower and upper section of the body excluding head, hands or feet. Garment sizing shall be done in accordance with NFPA 1500 and available for male and female firefighters. Generalized sizing such as small, medium, large, etc... shall be considered unacceptable.

COMPLY _____ **EXCEPTION _____**

CERTIFICATION

The design, materials, workmanship, construction and performance shall meet or exceed all National Fire Protection Association (NFPA) requirements as specified in NFPA 1971, Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, current edition. The manufacturer shall supply the Certificates of Compliance from Underwriters Laboratories showing compliance to the standard.

COMPLY _____ **EXCEPTION _____**

ISO 9001

The manufacturer shall be ISO 9001:2015 certified, thus assuring quality control procedures in the manufacturing of bunker gear. A copy of this certification shall be supplied.

COMPLY _____ **EXCEPTION _____**

EXCEPTION

Bidder shall clearly state in this document if they comply with the section requirements or takes an exception. Any section that is not clearly identified as compliant will be considered as an exception. All alternative proposals for each exceptions shall be described and listed on a separate document and attached to this bid. No exceptions to this paragraph shall be accepted.

COMPLY _____ **EXCEPTION _____**

LABELING

The coats and pants shall be labeled according to the applicable standards and regulations. A warning label shall be applied about use and protection of the garment. A human readable unique serial number shall be assigned to the coats and pants. The unique serial number shall also be translated into bar code so it can be read by care and maintenance facilities.

COMPLY _____ **EXCEPTION _____**

PACKAGING

The garments shall be individually packaged in separate boxes. The transportation box shall only contain the jacket and / or pants for an individual firefighter.

COMPLY _____ **EXCEPTION _____**

OUTER SHELL

The outer shell shall be approximately 6.6 oz/yd², constructed of a blend of aramid fibers, twill weave fabric (Pioneer), with a durable water-repellent finish. The outer shell color shall be khaki.

COMPLY _____ EXCEPTION_____

MOISTURE BARRIER

The moisture barrier material shall be two-layer CROSSTECH® black moisture barrier – Type 2F, which is comprised of a CROSSTECH™ membrane laminated to a 3.3 oz/yd² woven fabric constructed of 93% Meta-Aramid / 5% Para-Aramid / 2% Anti-Stat. The CROSSTECH™ membrane is an enhanced bicomponent membrane comprised of an expanded PTFE (polytetrafluoroethylene, for example Teflon®) matrix having a continuous hydrophilic (i.e., water-loving) and oleophobic (i.e., oil-hating) coating that is impregnated into the matrix.

All moisture barrier seams shall be stitched and seams shall be sealed with a minimum one (1) inch GORE-SEAM® tape to afford comparable viral penetration resistance performance. Any seam tape narrower than one (1) inch shall be unacceptable because of the liquid penetration risk associated with narrower seam tape.

Double rows of stitching shall not be acceptable as it reduces the surface area of the sealing tape on both sides of the seam.

The total weight of the moisture barrier shall be approximately 4.7 oz/yd².

COMPLY _____ EXCEPTION _____

THERMAL BARRIER

The thermal barrier shall consist of a twill weave face cloth constructed of 86% Aramid / 14% FR Viscose containing at least 60% of filament Nomex®. The facecloth shall weigh approximately 3.6 oz/yd² and be quilted with meta-aramid threads to a 50% Meta-Aramid/50% Para-Aramid Needlepunch Batting weighing approximately 4.0 oz/yd². The thermal barrier shall have a total weight of approximately 7.6 oz/yd². Bids offering other fiber blends or less than 60% filament Nomex® shall not be considered acceptable by this department.

COMPLY _____ EXCEPTION_____

THL RATING

The composite of outer shell, thermal barrier and moisture barrier shall meet or exceed the minimum THL requirement of the latest edition of NFPA 1971. Manufacturer shall state on his bid the THL value of the proposed composite.

THL: _____

	Coat	Pants
THL – Zone 1 / GENERAL	250	250

COMPLY _____ EXCEPTION _____

TPP RATING

The composite of outer shell, thermal barrier and moisture barrier shall meet or exceed the minimum TPP requirement of the latest edition of NFPA 1971. Manufacturer shall state on his bid the TPP value of the proposed composite.

	Coat	Pants
TPP – Zone 1 / GENERAL	43	43

COMPLY _____ EXCEPTION_____

REFLECTIVE TRIM TYPE

The retro-reflective trim shall be the three inches wide Scotchlite™ Reflective Material - 9587, lime-yellow with silver center, from 3M™ with MICRO Perforation. This material is also commonly referred to as triple trim. The MICRO perforations shall have diameter of 300 microns. Trims shall have two rows of lock stitching on each side of the trim.

COMPLY _____ EXCEPTION _____

POLYMER COATED ARAMID REINFORCEMENT COLOR

All polymer coated aramid reinforcements, where specified, shall be black in color.

COMPLY _____ EXCEPTION_____

HARDWARE

All zippers, snaps, or hook and loop shall be supplied by YKK.

Snaps shall be prong type.

Stitching of all long pieces of hook and loop shall be done with a triple row of lock stitching. Stitching of all short pieces of hook and loop shall be done with a single row of lock stitching around the edges with an "X" in the center. All hook and loop larger than one (1) inch shall have rounded corners.

COMPLY _____ EXCEPTION_____

2 - COAT SPECIFICATIONS

OUTER SHELL CONSTRUCTION

All "Major A" seams shall be made of seam type LSbm-4, including stitch types #504, 401 and 301. The seaming process starts by aligning two pieces of fabric together and stitching them together with what is commonly referred to as a "5 thread overlock", using stitch type #516, consisting of stitch type 504 and 401. The seam is then folded over and top stitched with two (2) rows of lock stitch # 301. All seams shall be stitched with Nomex® thread and sewn to prevent stitches from coming apart by themselves if cut or worn. Stress points such as pockets, pocket flaps, collar, storm flap shall be bar-tacked for increased durability. The base jacket shall be approximately 32 inches (grading) and cut to assure increased overlap with the pants. The collar line, the collar, the sleeve lengths and the gussets shall be cut in proportion with the chest size of the jacket. The coat design shall include a tapered fit, through an athletic cut and shall be 4 inches shorter in the front than back. The coat shall be constructed of 16 panels in order to provide optimal comfort and fit.

A drag harness shall be installed in the jacket between the outer shell and the liner. The drag harness shall be made of 1" wide supple Kevlar® webbing to limit the abrasion on the moisture barrier. The webbing shall loop around the shoulders starting horizontally below the shoulders at the back, wrap around both shoulders at the front and exit

through the outer shell at the back of the neck, below the collar seam. This design increases comfort and reduces the overall coat weight by reducing the amount of webbing between the outer shell and the liner. A flap made of outer shell shall be installed on the back of the jacket at the collar seam. The flap shall be shaped like an irregular pentagon with a rectangular base of six (6) inches wide by one inch and a half (1-1/2) long ending in a triangle. The length of the flap shall be three (3) inches. The flap shall open to give access to the strap of the drag harness. The flap shall be secured in closed position with the use of a hook and loop fastener two (2) inches by one inch and a quarter (1-1/4) with rounded corners and a box and cross stitching. A piece of silver reflective trim shall be heat applied vertically on the center of drag rescue device flap to clearly identify the drag rescue device handle. The letters DRD shall be etched with a laser in the silver reflective material. The harness shall be held in place between the outer shell and the inner liner by strategically positioned loops under the arm, along the path of the harness to keep it in the optimal position.

COMPLY _____ **EXCEPTION _____**

LINER CONSTRUCTION

All "Major B" seams shall be made of seam type SSa-2, including stitch types #504 and #401. The seaming process shall start by aligning two pieces of fabric together and stitching them together with what is commonly referred to as a "5 thread overlock", using stitch type #516, consisting of stitch types #504 and #401. In addition, the moisture barrier seams shall be sealed. The moisture barrier and thermal barrier component of the liner shall be sewn together at the edges using a piece of bias-cut neoprene and sewn together with one row of lock stitch, consisting of stitch type 301. All moisture barrier seams shall be stitched with Nomex® thread using 12 ± 1 stitches per inch. All thermal barrier seams shall be stitched with Nomex® thread using 10 ± 1 stitches per inch. All seams shall be oriented so that the edges of the thermal barrier and the moisture barrier sealing tape are inside the inner liner.

The liner shall be cut a maximum of three (3) inches shorter for the jacket and one (1) inch shorter for the sleeves. The liner shall be attached to the outer shell by one zipper running along the front closure of the jacket and shall be protected with a breathable moisture barrier facing. The liner shall also attached by two (2) color coded tabs with snaps at each sleeve end.

Two additional layers of thermal barrier shall be sewn in the shoulder area for increased CCHR protection. Should the manufacturer include a nonporous elbow reinforcement, the area under the elbow reinforcement shall also have a layer of neoprene sewn to the thermal barrier, to meet the Stored and Thermal Energy requirement.

The liner shall be equipped with an inspection port allowing for visual inspection of all sealed seams of the moisture barrier. The inspection port shall use a zipper closure of minimally sixteen (16) inches long.

COMPLY _____ **EXCEPTION_____**

THERMAL LINER ATTACHMENTS
(BOTTOM OF COAT)

Two tabs measuring three-quarter (3/4) of an inch by four and a half (4-1/2) inches inserted in the lower hem of the outer shell. Tabs are linked to the lining by snap buttons located on the lining, on the side of the jacket.

COMPLY _____ **EXCEPTION_____**

COAT CLOSURE SYSTEM

The positive closure system shall consist of a heavy-duty Vislon® zipper of approximately twenty (20) inches long graded to the size of the jacket. The positive closure shall be covered by a ONE PIECE storm flap extending from the bottom of the jacket to the top of the collar to prevent any gaps in the throat area. The one piece flap shall measure approximately three inches (3) wide and twenty four inches and three quarters (24-3/4) long. The storm flap and throat closure shall be constructed of three (3) layers: two (2) layers of outer shell and one (1) layer of moisture barrier. The storm flap shall have a special grabber made of outer shell material and closed cell foam padding to help opening the flap with a gloved hand. The grabber shall be approximately two inches (2) high by three inches (3) wide

at the widest point and shall be cut at an angle on the bottom. The grabber shall be located at the top of the storm flap. The flap shall be fastened to the front of the jacket by means of FR hook and loop fastener one and a half (1-1/2) inches wide for the full length of the flap and one and a half (1-1/2) inches on the front panel of the outer shell. The hook and loop fastener shall be sewn so that seams are at most 1" apart from one another in order to prevent damage with opening and closing the flap.

The moisture barrier in storm flap shall be the SAME as the moisture barrier selected in the MOISTURE BARRIER section of this specification. Use of moisture barrier other than that specified in the MOISTURE BARRIER section are not considered acceptable by this department.

Closures with separate throat tabs are not considered acceptable to this department.

COMPLY _____ EXCEPTION_____

ACTION BACK

The coat shall have two (2) extensible gusset installed in the center of the back. These gussets shall measure a minimum of eighteen (18) inches long and offer an extension of approximately (4) inches. The liner shall also include pleats that work together with the outer shell gussets to increase range of motion. The outer shell gussets shall have an elastic to ensure that the action back retracts when the arms are in the natural position. This feature is essential to help prevent accidentally getting caught in by the gusset. The extremities of these gussets shall be bartacked.

Coat designs with action backs that are not retractable are not considered acceptable by this department.

Coat designs with action backs that are not in the center of the back are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

AIRFLOW BACK

The coats shall be equipped with a system allowing air circulation on the back while wearing an SCBA. The Airflow system shall consist of a three-dimensional padding system of heavy-duty and precisely shaped closed-cell foam pads. The pads shall be distributed in a pattern optimized for air circulation and increased thermal protection. The pads shall also have 1/2" diameter holes to enable breathability. An aramid blend mesh shall be used to secure the pads on the thermal barrier. The padding shall extend from below the neck line to the low back and shall help cushioning the SCBA while creating Airflow channels.

Coats without Airflow channels are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

AIRFLOW SHOULDERS

The coats shall be equipped with a system allowing air circulation on the shoulders while wearing an SCBA. The Airflow system shall consist of a three-dimensional padding system of heavy-duty and precisely shaped closed-cell foam pads. The pads shall be distributed in a pattern optimized for air circulation and increased thermal protection. The pads shall also have 1/2" diameter holes to enable breathability. An aramid blend mesh shall be used to secure the pads on the thermal barrier. The padding shall be positioned on top of the shoulder and shall help cushioning the SCBA while creating Airflow channels.

Coats without Airflow channels are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

COLLAR

The collar shall be of variable height design with a four (4) layers construction consisting of two (2) layers of outer shell, one (1) layer of thermal barrier and one (1) layer of breathable moisture barrier. The collar shall afford the full protection of a four (4) inch collar at the back and the comfort of a three (3) inch collar at the front for integration with the SCBA face piece. The collar throat closure shall be a continuation of the coat storm flap to prevent any gaps in the throat area.

The collar shall have an internal hanging loop made of the specified outer shell. The loop shall measure a half inch (1/2) wide and have a usable width of three (3) inches.

Collars with separate throat tabs are not considered acceptable to this department.

Collars of single height are not considered acceptable to this department.

COMPLY _____ EXCEPTION_____

NO SEAM SHOULDER CONSTRUCTION

The coat outer shell shall be constructed such that there are no seams on top of the shoulder to prevent coat rise and unnecessary abrasion and pressure points.

Coat designs with seams on top of the shoulder are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

SLEEVES

The sleeves shall be cut full length in proportion with the chest sizes. The sleeve pattern shall include the top of the shoulder in order to avoid having a seam on top of the shoulder and limit coat rise. The sleeve shall consist of four (4) pieces, including one (1) single piece on the side of the body and three (3) on the opposite side. The sleeves shall be shaped like the natural bend of the arm. The elbow seams shall incorporate retro-reflective piping for additional night time and confined space visibility. The sleeve seams shall be positioned so that they do not come in contact with the coat body when the arms are on the sides.

Coat designs with sleeve seams that come in contact with the coat body and without retro-reflective piping are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

WATERWELL

The glove interface shall be sewn to a waterwell which in turn shall be sewn the outer shell to avoid water penetration in the sleeve and prevent debris from entering the sleeve. The waterwell shall be made of Flame Resistant Neoprene coated polycotton. The waterwell shall have a shallow design including a WATER EVACUATION SYSTEM to prevent accumulation of water when the arms are raised. This water evacuation system shall consist of two (2) water evacuation eyelets installed on each sleeve. The eyelets shall be positioned so that liquids draining from the eyelets are aiming away from the firefighter's face. This simple design is very light and allows liquids to drain quickly, helping to lower the risks associated with water infiltration and steam burn.

Coat designs with deep water wells and without drainage eyelets are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

GLOVE INTERFACE

A black Nomex® Spandex rib knit wristlet with thumbhole shall be attached to the waterwell. A Nomex bias shall be sewn all around the opening for the thumb using a double needle lock stitch #301. The lower extremity of the thumb opening shall be bartacked and the lower portion shall be integrated in the sewn edge of the wristlet with the waterwell.

COMPLY _____ EXCEPTION_____

ANGLED CUFFS

The sleeve cuffs shall be cut at an angle so that the top of the cuff is longer than the bottom to provide additional overlap of the cuff over the glove interface and provide additional protection while providing unrestricted range of motion.

Coat designs without angled cuffs are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

CUFF REINFORCEMENT

The sleeve cuffs shall be reinforced with polymer coated aramid. The reinforcement shall include a Nomex® cording to prevent stress points on the reinforcement material and reduce abrasion and repairs. The reinforcement material shall be sewn between the sleeve outer shell and waterwell to prevent thread abrasion and repairs. The reinforcement material shall be sewn with two (2) rows of locked stitches.

Coat designs with cuff reinforcements on top of the sleeve outer shell are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

PROFILED POCKETS WITH BUILT-IN HAND-WARMER

The coat shall be equipped with two profiled pockets to reduce bulk when bending and crawling; and eliminate possible snagging. The pockets shall be between the outer shell and liner and accessible through an angled opening for easy access, even when wearing an SCBA. The pockets shall be made of Kevlar® mesh for greater breathability with a woven Kevlar® on the bottom. The pockets shall close with a Vislon® zipper. The zipper shall have a Nomex® tab for ease of opening and closing. The pockets shall also have a hand-warmer compartment lined with Nomex® fleece.

The pockets shall be equipped with be a D-ring permanently riveted to one end of a strap of black Nomex® material of a minimum 5" long folded in half and positioned so that the D-ring can hang just outside the closed pocket. The other end of the black Nomex® material strap shall be permanently attached to the inside of the coat pocket with a bartack.

Coats without profiled pockets are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

RADIO POCKET

The coat shall have a radio pocket measuring eight (8) inches high by four (4) inches wide by two (2) inches deep. The pocket shall be constructed of the specified outer shell material and shall have hook and loop fasteners. The hook and loop fasteners shall be sewn with locks stitching in a box & cross pattern. The pocket shall have at least one (1) drainage eyelet on the bottom. The radio pocket shall have two (2) bartacks on each lower corner and one (1) bartack on each top corner for a total of six (6) bartacks.

COMPLY _____ EXCEPTION_____

RADIO POCKET FLAP

The radio pocket flap shall measure approximately four (4) inches high by three (3) inches wide. The radio pocket flap shall have a special grabber made of outer shell material and closed cell foam padding to help opening the pockets with a gloved hand. The grabber shall be approximately one and a quarter (1-1/4) inch high by three and a half (3-1/2) inches wide at the widest point and shall be cut at an angle on both sides. The grabber shall be located on the bottom edge of the flap. The flap shall close with the use of FR hook and loop fastener of three (3) inches high by two (2) inches wide and two (2) inches by two (2) inches on the face of the radio pocket. The radio pocket flap shall have one (1) bartack on each side for a total of two (2) bartacks.

COMPLY _____ EXCEPTION_____

INSIDE POCKET WITH HOOK AND LOOP

The coat shall be provided with an inside pocket measuring approximately seven and a half (7-1/2) inches wide by eight (8) inches high, constructed of outer shell material. The pocket shall be closed with a one (1) inch by three (3) inches of hook and loop fastener. The hook and loop fasteners shall be sewn with locks stitching in a box & cross pattern.

COMPLY _____ EXCEPTION_____

REFLECTIVE TRIM PATTERN

The trim shall be "NEW YORK" style; one (1) band around the lower portion of the jacket, one (1) band around the back and chest area below the armpit, two (2) bands on each arms, one (1) above and one (1) below the elbow.

COMPLY _____ EXCEPTION_____

MICROPHONE / P.A.S.S. LOOP

A loop for a microphone or P.A.S.S. alarm shall be installed above the radio pocket. The loop shall be one (1) inch high and have an opening of approximately one inch and three quarters (1-3/4) of usable space and be made of the specified outer shell. The loop shall be bartacked at each end to the front of the jacket.

COMPLY _____ EXCEPTION_____

FLASHLIGHT HOLDER

The coat shall have an adjustable loop made of outer shell. The loop shall measure eleven (11) inches long and be

attached to the outer shell with bartacks spaced approximately one inch and a half (1-1/2) apart, leaving an opening. The loop shall close onto itself with the use of hook and loop fastener. The coat shall also have an outer shell tab measuring approximately two (2) inches by three (3) inches instaled above the loop with bartacks.

COMPLY _____ EXCEPTION_____

3 - PANT SPECIFICATIONS

REGULAR WAIST

The pant shall be of regular waist design. The circumference of the waist shall allow the wearer to pull his pants up without restriction. The front to the pant shall measure between 9-3/4" and 12-7/16" from the "Complete Motion Crotch" seam to the top of the waist line and shall be graded with the waist size to provide appropriate overlap with the coat. The back to the pant shall measure between 15-3/8" and 17-7/8" from the "Complete Motion Crotch" seam to the top of the waist line and shall be graded with the waist size to provide appropriate overlap with the coat.

COMPLY _____ EXCEPTION _____

OUTER SHELL CONSTRUCTION

All "Major A" seams shall be made of seam type LSbm-4, including stitch types #504, #401 and #301. The seaming process shall start by aligning two pieces of fabric together and stitching them together with what is commonly referred to as a "5 thread overlock", using stitch type #516, consisting of stitch types #504 and #401. The seam shall then be folded over and top stitched with two (2) rows of lock stitch consisting of stitch type #301. All seams shall be stitched with Nomex® thread using 9 ± 1 stitches per inch and sewn to prevent stitches from coming apart by themselves if cut or worn. Stress points such as pockets and pocket flaps shall be bar-tacked for increased durability.

The pant shall be made of ten (10) panels to provide complete range of motion. Pant designs with less than eleven panels shall not be considered acceptable for this department

COMPLY _____ EXCEPTION_____

LINER CONSTRUCTION

All "Major B" seams shall be made of seam type SSa-2, including stitch types #504 and #401. The seaming process shall start by aligning two pieces of fabric together and stitching them together with what is commonly referred to as a "5 thread overlock", using stitch type #516, consisting of stitch types #504 and #401. In addition, the moisture barrier seams shall be sealed. The moisture barrier and thermal barrier component of the liner shall be sewn together at the edges using a piece of bias-cut neoprene and sewn together with one row of lock stitch, consisting of stitch type 301. All moisture barrier seams shall be stitched with Nomex® thread using 12 ± 1 stitches per inch. All thermal barrier seams shall be stitched with Nomex® thread using 10 ± 1 stitches per inch. All seams shall be oriented so that the edges of the thermal barrier and the moisture barrier sealing tape are inside the inner liner.

The liner shall be cut a maximum of three (3) inches shorter for the outer shell. A waist band shall be sewn to the inside of the outer shell. . A two (2) inch waist band made of thermal barrier and moisture barrier shall be sewn to the inside of the outer shell. The liner shall be attached between the outer shell and the waist band with the use of one (1) full length zipper. The liner shall also be attached to the shell with two (2) tabs with snaps at each leg. The waist band shall be kept in position with the use of five (5) snaps positioned around the waist, further securing the liner to the outer shell.

Two additional layers of thermal barrier shall be sewn in the knee area for increased CCHR protection.

The liner shall be equipped with an inspection port allowing for visual inspection of all sealed seams of the moisture barrier. The inspection port shall use a zipper closure of minimally sixteen (16) inches long.

COMPLY _____ EXCEPTION_____

PANT CLOSURE SYSTEM

The positive closure system shall consist of a heavy duty VISLON® zipper of approximately ten (10) inches long. The storm flap shall be approximately two and a quarter (2-1/4) inches wide and eleven (11) inches long and constructed of two (2) layers of outer shell material. The pant fly flap shall have a special grabber made of outer shell material and closed cell foam padding to help opening the flap with a gloved hand. The grabber shall be approximately one and a quarter (1-1/4) inch high by three (3) inches wide at the widest point and shall be cut at an angle on one side. The grabber shall be located on the top the flap. The flap shall be fastened to the front of the pants by means of FR hook and loop fastener two (2) inches by ten inches and three quarter (10-3/4) on the flap and two (2) inches by ten inches and a half (10-1/2) on the right front panel of the outer shell. 360 degree moisture and thermal protection shall be afforded by overlapping the left and right side of the liner.

The pant shall have a removable Nomex® belt shall be made of two (2) inch wide webbing. The webbing shall be passed through six (6) belt loops fixed on the pants. The belt shall include an adjustable high-temp plastic buckle. The belt loops shall be made of outer shell and shall be installed at the waist area of the pants. Each belt loop shall have an opening of two and a half (2-1/2) inches and shall be secured to the pant with lock stitching and bartacks.

COMPLY _____ EXCEPTION_____

"FULL MOTION" LEG DESIGN

The pant shall be designed with ten (10) body panels to provide complete range of motion and comfort. There shall be a seam above the knee with retroreflective piping at the front of each leg to increase range of motion as well as additional night time and confined space visibility. There shall be a seam behind the knee of each leg to increase range of motion. The leg inseams shall be positioned so that they do not come into with the opposite leg when walking to prevent abrasion and repairs.

Pant designs with less than ten (10) body panels are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

COMPLETE MOTION CROTCH

The pant shall be designed with an oversized diamond shape panels to provide complete range of motion and comfort.

Pant designs without an oversized diamond shape panels are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

POCKETS & REINFORCEMENT

The pants shall be provided with two (2) bellow pockets measuring approximately eight (10) inches by ten (10) inches and two (2) inches deep on all sides of the pockets. The pockets shall be fitted with a full width flap measuring approximately three inches and a half (3-1/2) high.The pant pocket flaps shall have a special grabber made of outer shell material and closed cell foam padding to help opening the pockets with a gloved hand. The grabbers shall be approximately one and a quarter (1-1/4) inch high by five and a half (5-1/2) inches wide at the widest point and shall be cut at an angle on both sides. The grabbers shall be located on the bottom edge of the flap in the center of the flap. The pocket flaps shall have two (2) hook fasteners of two (2) inches by two (2) inches. The pockets shall have two (2) loop fasteners measuring two (2) inches wide by one and a half (1-1/2) inch high. The hook and loop fasteners shall be sewn with locks stitching in a box & cross pattern. The bottom of the pockets shall be provided with two (2) evacuation eyelets. Each pocket shall have two (2) bartacks on each lower corner, one (1) bartack on each top corner and one (1) bartack on each side of the pocket flap for a total of eight (8) bartacks.

The bottom of the pockets shall be reinforced with one (1) layer of Kevlar® from the bottom of the pocket extending to the top of the pockets.

COMPLY _____ EXCEPTION_____

KNEE REINFORCEMENT / PADDING

The knee area shall be designed to enhance mobility with the use of darts and pleats in the outer shell. The knee area shall be molded and articulated to better shape the knee in order to increase flexibility, mobility and comfort. The knee area shall be reinforced by a rectangular piece of polymer coated aramid graded in length in proportion with the pant size and shall be double stitched to the outer shell. A padding made of one (1) layer of thermally stable FR closed cell foam shall be inserted between the polymer coated aramid knee reinforcement and the pant outer shell.

COMPLY _____ EXCEPTION_____

CUFF REINFORCEMENT

The pant cuffs shall have a reverse boot cut design (shorter at the back than the front) and reinforced with polymer coated aramid. The reinforcement shall include a Nomex® cording to prevent stress points on the reinforcement material and reduce abrasion and repairs. The reinforcement material shall be sewn inside the outer shell to prevent thread abrasion and repairs. The reinforcement material shall be sewn with two (2) rows of locked stitches.

Pant designs with cuff reinforcements on top of the leg outer shell are not considered acceptable by this department.

COMPLY _____ EXCEPTION_____

REFLECTIVE TRIM PATTERN

The trim shall be "NFPA" style; one (1) band around the lower portion of each leg.

COMPLY _____ EXCEPTION_____

NOMEX® BELT

The belt shall be removable and adjustable on both end and shall be made of two (2) inches wide NOMEX® webbing. The belt shall include adjustable plastic buckle on both extremity. Each belt end shall be finished using a clean finish hem.

COMPLY _____ EXCEPTION_____

BELT LOOPS

The pant shall be equipped with a minimum of six (6) belt loops made of outer shell and shall be installed equally spaced around the waist area of the pant. Each belt loop shall be two (2) inches wide, have an opening of two and a quarter (2-1/4) inches and shall be secured to the pant with lock stitching and bartacks.

COMPLY _____ EXCEPTION_____

SUSPENDERS

The pants shall be equipped with Deluxe H-style removable suspenders. The suspenders shall be constructed of two (2) inch wide heavy-duty cotton webbing. The horizontal component of the suspenders forming the H back shall be made

of elastic material to increase comfort when bending forward. The suspenders shall be attached to the pant by passing the ends through high-temp sliders in the belt loops around the waist of the pant and folding each end over onto itself while securing the Hook and Loop fasteners 1-1/2" x 2" sewn with a box and cross pattern. A quick adjust metal "ladderlock" buckle shall be installed on the front of the suspender to tighten or release the suspenders quickly. In addition, a shoulder padding made of neoprene shall be sewn to the shoulder area of the suspenders. The padding shall measure a minimum of 8 inches long by the width of the webbing. The suspenders shall be cut in proportion to the size of the fire fighter measurements and completely removable for ease of cleaning.

COMPLY _____ EXCEPTION_____

4 – PERSONALIZATION SPECIFICATIONS

COATS - LEFT SLEEVE (F)

NOMEX® AMERICAN FLAG

The garment shall have an American flag embroidered with Nomex® thread measuring 2-1/2" by 1-1/4".

COMPLY _____ EXCEPTION_____

COATS - BACK UNDER NECK (H) LETTERING

All units shall have the same lettering at this position.

- FD name : DEPT NAME

- Lettering Size & Color: 3M Scotchlite® 8987, 3" - Lime-Yellow

Letters shall be made using 3M Scotchlite® 8987, 3" - Lime-Yellow material and sewn using Nomex thread with single needle lock stitch type 301 all around the letter.

- Lettering Shape : Straight

- Attachment method: SEWN ON SHELL

Letters shall be directly sewn on the outer shell.

COMPLY _____ EXCEPTION _____

COATS - HEM OF COAT (M)LETTERING

Each unit shall have their own specific lettering.

- Option: Firefighter Name

- Lettering Size & Color: 3M Scotchlite® 8987, 3" - Lime-Yellow

Letters shall be made using 3M Scotchlite® 8987, 3" - Lime-Yellow material and sewn using Nomex thread with single needle lock stitch type 301 all around the letter.

- Lettering Shape : Straight

- Attachment method: SEWN ON REMOVABLE PATCH

A patch for lettering constructed of self fabric shall be installed and secured to the garment with the use of four (4) inches wide hook and loop fastener. A one piece loop fastener shall be sewn to the garment outer shell and a one

piece hook fastener shall be sewn to the back of the patch. Each section of the fastener shall be sewn using Nomex thread with single needle lock stitch type 301 all around and have three (3) equally spaces extra stitch lines running on the length of the fastener.

- **Patch Size:** 4" X 17"
- **Patch Color:** Outer Shell (Khaki Pioneer)

COMPLY _____ EXCEPTION _____

Bidder must have an In-State Service Center.

COMPLY_____ **EXCEPTION**_____

Successful Bidder Must Size with Sizing Kit.

COMPLY_____ **EXCEPTION**_____

Pricing Shall Apply to ALL Sizes (NO OVERSIZE CHARGES) and Include Delivery.

COMPLY_____ **EXCEPTION**_____

Sizing MUST BE AVAILABLE in Chest and Waist increments of 2" and Sleeve and Inseam increments of 1". Sleeve and/or Inseam increments greater than 1" are not considered acceptable by this department.

COMPLY_____ **EXCEPTION**_____