<u>WOMEN'S SHIRT SPECIFICATIONS</u> Flying Cross by Fechheimer Item: IADOT-LSL

Fabric:	Content:	75% Dacron Polyester / 25% Wool Worsted conforming to the following specifications.
	Weight:	9 – 9.5 oz. Per linear yard.
	Construction	50 ends per inch X 46 picks per inch.
	Tear	
	Strength:	75 Pounds in the Warp X 150 Pounds in the Filling.
		be 75% Dacron Polyester/25% Wool, Raeford #6037-585. Color rey. Epaulets to be Raeford #3906-11000 black contrast color

STYLE:

Dress style, top center placket front with zipper, tapered fit, banded collar, long sleeves with square cuffs, and dress shirttail. Two pleated breast pockets with topstitched scalloped flaps. Shirts to have contrasting Black Raeford 3906-11000 shoulder straps. Full badge reinforcement and nameplate. Matching inside yoke and band of high luster Poly Twill. Work wear industrial style shirt construction is unacceptable and shall be cause for rejection.

COLLAR & STAND:

Collar points to measure 2 7/8" long with ultrasonically fused-in Mylar stays. Collar to have woven interlining of #285 Stabilized Mello-Press. Stays to be 2 1/2" long, 3/8" minimum width, and to be fused to under side of collar interlining. Stays applied directly to collar material itself unacceptable. Collar height at rear 1-1/2". Collar topstitched with ¹/4" Double Needle Stitching. Collar stand to measure 1-5/16" at rear and band to be interlined with "Crease-N- Tack." Collar material itself (top or underside) shall have no fusing to Mylar stays or collar interlining.

FRONT:

The right front shall have a top center placket $1 \frac{1}{2}$ wide with two double rows of stitching. The shirt will have 6 buttons and buttonholes on the front with two replacement buttons sewn on bottom tail; spacing between each will be $3\frac{1}{2}$ except the spacing between the neck button and the first button on the front, which will be approximately $3\frac{1}{4}$. Top center placket to have woven interlining of #550 Stabilized Mello-Press. Non-woven interlining unacceptable and shall be cause for rejection. The fronts shall be joined to the yoke so that both raw edges of the yoke are turned under, with the front sandwiched between, and then all three are stitched down with a 1/16 raised stitch. Safety stitch joining unacceptable. An $11\frac{1}{2}$ nylon zipper, to be set below the second button and buttonhole on the shirtfront, shall accomplish front closure. The top, second and bottom buttons to be functional and attached to the left front, the balance to be sewn over the buttonholes on the right front.

YOKE:

Two piece yoke approximately 3" deep at center. Outside yoke to be ¼" double needle topstitched along the edge. The inside yoke to be of 100% high luster Poly Twill.

TIE TACK EYELET:

There shall be a 3/8" horizontal buttonhole eyelet centered on the top center placket $\frac{1}{4}$ " below the second buttonhole.

SHOULDER STRAPS:

Contrasting Black Shoulder Straps to be made from Raeford Mills's style 3906, color 11000. Shoulder straps to be two-piece pointed, 1/4" double needle topstitched and to be set on yoke with leading topstitch conforming with front joining seam. To measure 2" at sleeve tapering to 1-3/8" and set not more than 1/2" from collar set seam. Cross stitched approximately 2" from sleeve seam. Shoulder strap to have functional buttonhole to attach to sewn button on shoulder of shirt. Edge stitched shoulder strap construction unacceptable.

BADGE REINFORCEMENT:

Two-ply sling 1" wide centered over left pocket and stitched to shoulder seam and flap setting stitch. It shall have 2 (two) round embroidered eyelets 1 $\frac{1}{2}$ " from top of pocket flap spaced 1 $\frac{1}{2}$ " apart and centered vertically on the sling.

NAMEPLATE REINFORCEMENT:

Reinforcement piece of shell fabric on the inside of the right front to be held in place by round embroidered eyelets only. Eyelets to be centered 1" above the right pocket flap and spaced 15/8" apart from center to center.

POCKETS:

Two pleated breast patch pockets with clipped corners and 1 $\frac{1}{4}$ " stitched pleats. Pleats shall be stitched top and bottom and full length of pleat to prevent spreading. Pocket to measure 5" wide, 5" deep. Breast pockets are set to shirtfront with $\frac{1}{4}$ " double needle stitching. Left breast pocket to have an inside pencil pocket. Each pocket to have hook Velcro, 3/4" long by $\frac{1}{2}$ " wide, positioned on both edges of pocket to correspond with outer scalloped flap points as specified. Velcro to be stitched all sides and to be sewn through pocket and shirt for added reinforcement.

FLAPS:

Two-piece scalloped design to measure 5 $\frac{1}{4}$ " across and 2-1/4" in depth at center point, 1-3/4" at sides. Secured to shirtfront approximately 3/8" above pocket. Left flap to have invisible pencil opening 1-1/2" to correspond precisely with pencil slot of pocket. (Stop & start stitching for pencil opening unacceptable and shall be cause for rejection.) Flaps to be 1/4" double needle topstitched. Flaps to have woven interlining of #550 Stabilized Mello-Press. Creased and edge stitched pocket flap construction unacceptable. Under side of the flap to have looped Velcro 3/4" long by 1/2" wide stitched all sides, positioned on outer points of both pocket flaps to secure with corresponding Velcro strips on shirt pocket. Each flap shall have a button centered on uncut sewn buttonhole.

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SLEEVES:

To be long sleeves with approximate 3 1/2" sleeve vent. Sleeve shall have a one-piece, elbow reinforcement and vent facing. Elbow reinforcement shall extend into the sleeve-closing seam and to be set to sleeve with $\frac{1}{4}$ " double needle stitching.

CUFFS:

Two piece $\frac{1}{2}$ -inch hemmed cuff with $\frac{1}{4}$ " double needle topstitching. Square cuffs to measure 2 $\frac{1}{2}$ " in depth. Cuffs to have two buttons and corresponding buttonholes set vertically with one button and buttonhole in center of facing. Cuff to have woven interlining of #550 Stabilized Mello-Press.

BUTTONS:

First grade 20-ligne, 4 hole melamine to match color of shirt.

SEWING:

All parts are ¹/₄" double needle topstitched, including yoke, top center placket and elbow reinforcement. Sleeve inserting seams are ¹/₄" double needle stitched. Sleeve closing and side body seams are safety stitched.

THREAD:

All sewing threads to be color fast polyester wrap to match.

INTERLININGS:

Collar shall be interlined with #285 Stabilized MelloPress. Cuffs, pocket flaps, shoulder straps and top center to be interlined with #550 Stabilized MelloPress. Collar band interlining to be Crease-N-Tack.

MILITARY CREASES:

There shall be five sewn-in sharp military creases on all shirts. One crease on each front to be centered vertically. Front creases shall be through pockets and flaps. Spacing for three military creases across shirt back to be proportionate to the size of the shirt.

CONSTRUCTION:

Collar, flaps, straps and cuffs are made with conventional construction. Top ply, bottom ply and interlining are first stitched together, then turned right side out and finally topstitched.

<u>MEN'S SHIRT SPECIFICATIONS</u> Flying Cross by Fechheimer Item: IADOT-LS / IADOT-LSM

Fabric:	Content:	75% Dacron Polyester / 25% Wool Worsted conforming to the following specifications.
	Weight:	9 – 9.5 oz. Per linear yard.
	Construction	50 ends per inch X 46 picks per inch.
	<u>Tear</u>	
	<u>Strength:</u>	75 Pounds in the Warp X 150 Pounds in the Filling.
	Basic fabric to be 75% Dacron Polyester/25% Wool, Raeford #6037-585. Color to be Nickel Grey. Epaulets to be Raeford #3906-11000 black contrast color	

STYLE:

Dress style, top center placket front with zipper, full cut and tapered fit available, banded collar, long sleeves with square cuffs, and dress shirttail. Two pleated breast pockets with topstitched scalloped flaps. Shirts to have contrasting Black Raeford 3906-11000 shoulder straps. Full badge reinforcement and nameplate. Matching inside yoke and band of high luster Poly Twill. Work wear industrial style shirt construction is unacceptable and shall be cause for rejection.

COLLAR & STAND:

Collar points to measure 3" long with ultrasonically fused-in Mylar stays. Collar to have woven interlining of #285 Stabilized Mello-Press. Stays to be 2 3/4" long, 3/8" minimum width, and to be fused to under side of collar interlining. Stays applied directly to collar material itself unacceptable. Collar height at rear 1-1/2". Collar topstitched with ¹/₄" Double Needle Stitching. Collar stand to measure 1-5/16" at rear and band to be interlined with "Crease-N- Tack." Collar material itself (top or underside) shall have no fusing to Mylar stays or collar interlining.

FRONT:

The left front shall have a top center placket 1 $\frac{1}{2}$ " wide with two double rows of stitching. The shirt will have 7 buttons and buttonholes on the front with two replacement buttons sewn on bottom tail; spacing between each will be 3 $\frac{3}{4}$ " except the spacing between the neck button and the first button on the front, which will be approximately 3 $\frac{1}{4}$ ". Top center placket to have woven interlining of #550 Stabilized Mello-Press. Non-woven interlining unacceptable and shall be cause for rejection. The fronts shall be joined to the yoke so that both raw edges of the yoke are turned under, with the front sandwiched between, and then all three are stitched down with a 1/16" raised stitch. Safety stitch joining unacceptable. A 15" nylon zipper, to be set below the second button and buttonhole on the shirtfront, shall accomplish front closure. The top, second and bottom buttons to be functional and attached to the right front, the balance to be sewn over the buttonholes on the left front.

YOKE:

Two piece yoke approximately 4" deep at center. Outside yoke to be ¹/₄" double needle topstitched along the edge. The inside yoke to be of 100% high luster Poly Twill.

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TIE TACK EYELET:

There shall be a 3/8" horizontal buttonhole eyelet centered on the top center placket $\frac{1}{4}$ " below the second buttonhole.

SHOULDER STRAPS:

Contrasting Black Shoulder Straps to be made from Raeford Mills's style 3906, color 11000. Shoulder straps to be two-piece pointed, 1/4" double needle topstitched and to be set on yoke with leading topstitch conforming with front joining seam. To measure 2" at sleeve tapering to 1-3/8" and set not more than 1/2" from collar set seam. Cross stitched approximately 2" from sleeve seam. Shoulder strap to have functional buttonhole to attach to sewn button on shoulder of shirt. Edge stitched shoulder strap construction unacceptable.

BADGE REINFORCEMENT:

Two-ply sling 1" wide centered over left pocket and stitched to shoulder seam and flap setting stitch. It shall have 2 (two) round embroidered eyelets 1 $\frac{1}{2}$ " from top of pocket flap spaced 1 $\frac{1}{2}$ " apart and centered vertically on the sling.

NAMEPLATE REINFORCEMENT:

Reinforcement piece of shell fabric on the inside of the right front to be held in place by round embroidered eyelets only. Eyelets to be centered 1" above the right pocket flap and spaced 15/8" apart from center to center.

POCKETS:

Two pleated breast patch pockets with clipped corners and $1\frac{1}{2}$ " stitched pleats. Pleats shall be stitched top and bottom and full length of pleat to prevent spreading. Pocket to measure 5-5/8" wide, 6" deep. Breast pockets are set to shirtfront with $\frac{1}{4}$ " double needle stitching. Left breast pocket to have an inside pencil pocket. Each pocket to have hook Velcro, $\frac{3}{4}$ " long by $\frac{1}{2}$ " wide, positioned on both edges of pocket to correspond with outer scalloped flap points as specified. Velcro to be stitched all sides and to be sewn through pocket and shirt for added reinforcement.

FLAPS:

Two-piece scalloped design to measure 5 7/8"" across and 2-3/4" in depth at center point, 2-1/4" at sides. Secured to shirtfront approximately 3/8" above pocket. Left flap to have invisible pencil opening 1-1/2" to correspond precisely with pencil slot of pocket. (Stop & start stitching for pencil opening unacceptable and shall be cause for rejection.) Flaps to be 1/4" double needle topstitched. Flaps to have woven interlining of #550 Stabilized Mello-Press. Creased and edge stitched pocket flap construction unacceptable. Under side of the flap to have looped Velcro 3/4" long by 1/2" wide stitched all sides, positioned on outer points of both pocket flaps to secure with corresponding Velcro strips on shirt pocket. Each flap shall have a button centered on uncut sewn buttonhole.

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SLEEVES:

To be long sleeves with approximate $4 \ 1/2$ " sleeve vent. Sleeve shall have a one-piece, elbow reinforcement and vent facing. Elbow reinforcement shall extend into the sleeve-closing seam and to be set to sleeve with $\frac{1}{4}$ " double needle stitching.

CUFFS:

Two piece $\frac{1}{2}$ -inch hemmed cuff with $\frac{1}{4}$ " double needle topstitching. Square cuffs to measure 3" in depth. Cuffs to have two buttons and corresponding buttonholes set vertically with one button and buttonhole in center of facing. Cuff to have woven interlining of #550 Stabilized Mello-Press.

BUTTONS:

First grade 20-ligne, 4 hole melamine to match color of shirt.

SEWING:

All parts are ¹/₄" double needle topstitched, including yoke, top center placket and elbow reinforcement. Sleeve inserting seams are ¹/₄" double needle stitched. Sleeve closing and side body seams are safety stitched.

THREAD:

All sewing threads to be color fast polyester wrap to match.

INTERLININGS:

Collar shall be interlined with #285 Stabilized MelloPress. Cuffs, pocket flaps, shoulder straps and top center to be interlined with #550 Stabilized MelloPress. Collar band interlining to be Crease-N-Tack.

MILITARY CREASES:

There shall be five sewn-in sharp military creases on all shirts. One crease on each front to be centered vertically. Front creases shall be through pockets and flaps. Spacing for three military creases across shirt back to be proportionate to the size of the shirt.

CONSTRUCTION:

Collar, flaps, straps and cuffs are made with conventional construction. Top ply, bottom ply and interlining are first stitched together, then turned right side out and finally topstitched.

<u>WOMEN'S SHIRT SPECIFICATIONS</u> Flying Cross by Fechheimer Item: IADOT-SSL

Fabric:	Content:	75% Dacron Polyester / 25% Wool Worsted conforming to the following specifications.
	<u>Weight:</u>	9 – 9.5 oz. Per linear yard.
	Construction	50 ends per inch X 46 picks per inch.
	Tear	
	Strength:	75 Pounds in the Warp X 150 Pounds in the Filling.
		be 75% Dacron Polyester/25% Wool, Raeford #6037-585. Color rey. Epaulets to be Raeford #3906-11000 black contrast color

STYLE:

Dress style, plain revere front with zipper, tapered fit, Open Sport Collar, short sleeves, and dress shirttail. Two pleated breast pockets with topstitched scalloped flaps. Shirts to have contrasting Black Raeford 3906-11000 shoulder straps. Full badge reinforcement and nameplate. Matching inside yoke and banana band of high luster Poly Twill. Work wear industrial style shirt construction is unacceptable and shall be cause for rejection.

COLLAR:

Open Sport collar shall be one piece. Collar points to measure 2 7/8" long with ultrasonically fused-in Mylar stays. There is no button or buttonhole at the neck. Collar to have woven interlining of #285 Stabilized Mello-Press. Stays to be 2 $\frac{1}{2}$ " long, 3/8" minimum width, and to be fused to underside of collar interlining. Stays applied directly to collar material itself unacceptable. Collar topstitched 1/4" off the edge. Collar material itself (top or underside) shall have no fusing to Mylar stays or collar interlining.

FRONT:

To be made with an Open Sport shirt front with each front having turn back facings approximately 3" in width. The shirt will have 5 buttons and 2 horizontal buttonholes on the front with two replacement buttons sewn on bottom tail; spacing between each will be 3 $\frac{1}{2}$ " except the spacing between the neck button and the first button on the front, which will be approximately 3 $\frac{1}{4}$ ". The fronts shall be joined to the yoke so that both raw edges of the yoke are turned under, with the front sandwiched between, and then all three are stitched down with a 1/16" raised stitch. Safety stitch joining unacceptable. An 11 1/2" nylon zipper, to be set below the first button and buttonhole on the shirtfront, shall accomplish front closure. The top and bottom buttons to be functional with horizontal buttonholes and attached to the left front, the balance of non-functional buttons to be sewn on the right front.

YOKE:

Two piece yoke approximately 3" deep at center. Outside yoke to be ¹/4" double needle topstitched along the edge. The inside yoke to be of 100% high luster Poly Twill.

SHOULDER STRAPS:

Contrasting Black Shoulder Straps to be made from Raeford Mills's style 3906, color 11000. Shoulder straps to be two-piece pointed, 1/4" double needle topstitched and to be set on yoke with leading topstitch conforming with front joining seam. To measure 2" at sleeve tapering to 1-3/8" and set not more than 1/2" from collar set seam. Cross stitched approximately 2" from sleeve seam. Shoulder strap to have functional buttonhole to attach to sewn button on shoulder of shirt. Edge stitched shoulder strap construction unacceptable.

BADGE REINFORCEMENT:

Two-ply sling 1" wide centered over left pocket and stitched to shoulder seam and flap setting stitch. It shall have 2 (two) round embroidered eyelets 1 $\frac{1}{2}$ " from top of pocket flap spaced 1 $\frac{1}{2}$ " apart and centered vertically on the sling.

NAMEPLATE REINFORCEMENT:

Reinforcement piece of shell fabric on the inside of the right front to be held in place by round embroidered eyelets only. Eyelets to be centered 1" above the right pocket flap and spaced 15/8" apart from center to center.

POCKETS:

Two pleated breast patch pockets with clipped corners and 1 $\frac{1}{4}$ " stitched pleats. Pleats shall be stitched top and bottom and full length of pleat to prevent spreading. Pocket to measure 5" wide, 5" deep. Breast pockets are set to shirtfront with $\frac{1}{4}$ " double needle stitching. Left breast pocket to have an inside pencil pocket. Each pocket to have hook Velcro, 3/4" long by $\frac{1}{2}$ " wide, positioned on both edges of pocket to correspond with outer scalloped flap points as specified. Velcro to be stitched all sides and to be sewn through pocket and shirt for added reinforcement.

FLAPS:

Two-piece scalloped design to measure 5 $\frac{1}{4}$ " across and 2-1/4" in depth at center point, 1-3/4" at sides. Secured to shirtfront approximately 3/8" above pocket. Left flap to have invisible pencil opening 1-1/2" to correspond precisely with pencil slot of pocket. (Stop & start stitching for pencil opening unacceptable and shall be cause for rejection.) Flaps to be 1/4" double needle topstitched. Flaps to have woven interlining of #550 Stabilized Mello-Press. Creased and edge stitched pocket flap construction unacceptable. Under side of the flap to have looped Velcro 3/4" long by 1/2" wide stitched all sides, positioned on outer points of both pocket flaps to secure with corresponding Velcro strips on shirt pocket. Each flap shall have a button centered on uncut sewn buttonhole.

SLEEVES:

Sleeves are to be straight and whole and to have a $\frac{3}{4}$ " hem and to finish approximately 8" long from shoulder seam.

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BUTTONS:

First grade 20-ligne, 4 hole melamine to match color of shirt.

SEWING:

All parts except for the collar are ¹/₄" double needle topstitched, including the yoke. Collar is topstitched ¹/₄" off the edge. Sleeve inserting seams are ¹/₄" double needle stitched. Sleeve closing and side body seams are safety stitched.

THREAD:

All sewing threads to be color fast polyester wrap to match.

INTERLININGS:

Collar shall be interlined with #285 Stabilized MelloPress. Pocket flaps and shoulder straps to be interlined with #550 Stabilized MelloPress.

MILITARY CREASES:

There shall be five sewn-in sharp military creases on all shirts. One crease on each front to be centered vertically. Front creases shall be through pockets and flaps. Spacing for three military creases across shirt back to be proportionate to the size of the shirt.

CONSTRUCTION:

Collar, flaps and straps are made with conventional construction. Top ply, bottom ply and interlining are first stitched together, then turned right side out and finally topstitched.

<u>MEN'S SHIRT SPECIFICATIONS</u> Flying Cross by Fechheimer Item: IADOT-SSM

Fabric:	Content:	75% Dacron Polyester / 25% Wool Worsted conforming to the following specifications.
	Weight:	9 – 9.5 oz. Per linear yard.
	Construction	50 ends per inch X 46 picks per inch.
	<u>Tear</u>	
	<u>Strength:</u>	75 Pounds in the Warp X 150 Pounds in the Filling.
	Basic fabric to be 75% Dacron Polyester/25% Wool, Raeford #6037-585. Color to be Nickel Grey. Epaulets to be Raeford #3906-11000 black contrast color	

STYLE:

Dress style, plain revere front with zipper, full cut and tapered fit available, Open Sport Collar, short sleeves, and dress shirttail. Two pleated breast pockets with topstitched scalloped flaps. Shirts to have contrasting Black Raeford 3906-11000 shoulder straps. Full badge reinforcement and nameplate. Matching inside yoke and banana band of high luster Poly Twill. Work wear industrial style shirt construction is unacceptable and shall be cause for rejection.

COLLAR:

Open Sport collar shall be one piece. Collar points to measure 3" long with ultrasonically fused-in Mylar stays. There is no button or buttonhole at the neck. Collar to have woven interlining of #285 Stabilized Mello-Press. Stays to be 2 3/4 long, 3/8" minimum width, and to be fused to underside of collar interlining. Stays applied directly to collar material itself unacceptable. Collar topstitched 1/4" off the edge. Collar material itself (top or underside) shall have no fusing to Mylar stays or collar interlining.

FRONT:

To be made with an Open Sport shirt front with each front having turn back facings approximately 3" in width. The shirt will have 6 buttons and 2 horizontal buttonholes on the front with two replacement buttons sewn on bottom tail; spacing between each will be 3 $\frac{3}{4}$ " except the spacing between the neck button and the first button on the front, which will be approximately 3 $\frac{1}{4}$ ". The fronts shall be joined to the yoke so that both raw edges of the yoke are turned under, with the front sandwiched between, and then all three are stitched down with a 1/16" raised stitch. Safety stitch joining unacceptable. A 15" nylon zipper, to be set below the first button and buttonhole on the shirtfront, shall accomplish front closure. The top and bottom buttons to be functional with horizontal buttonholes and attached to the right front, the balance of non-functional buttons to be sewn on the left front.

YOKE:

Two piece yoke approximately 4" deep at center. Outside yoke to be ¹/₄" double needle topstitched along the edge. The inside yoke to be of 100% high luster Poly Twill.

SHOULDER STRAPS:

Contrasting Black Shoulder Straps to be made from Raeford Mills's style 3906, color 11000. Shoulder straps to be two-piece pointed, 1/4" double needle topstitched and to be set on yoke with leading topstitch conforming with front joining seam. To measure 2" at sleeve tapering to 1-3/8" and set not more than 1/2" from collar set seam. Cross stitched approximately 2" from sleeve seam. Shoulder strap to have functional buttonhole to attach to sewn button on shoulder of shirt. Edge stitched shoulder strap construction unacceptable.

BADGE REINFORCEMENT:

Two-ply sling 1" wide centered over left pocket and stitched to shoulder seam and flap setting stitch. It shall have 2 (two) round embroidered eyelets 1 $\frac{1}{2}$ " from top of pocket flap spaced 1 $\frac{1}{2}$ " apart and centered vertically on the sling.

NAMEPLATE REINFORCEMENT:

Reinforcement piece of shell fabric on the inside of the right front to be held in place by round embroidered eyelets only. Eyelets to be centered 1" above the right pocket flap and spaced 15/8" apart from center to center.

POCKETS:

Two pleated breast patch pockets with clipped corners and $1\frac{1}{2}$ " stitched pleats. Pleats shall be stitched top and bottom and full length of pleat to prevent spreading. Pocket to measure 5-5/8" wide, 6" deep. Breast pockets are set to shirtfront with $\frac{1}{4}$ " double needle stitching. Left breast pocket to have an inside pencil pocket. Each pocket to have hook Velcro, 3/4" long by $\frac{1}{2}$ " wide, positioned on both edges of pocket to correspond with outer scalloped flap points as specified. Velcro to be stitched all sides and to be sewn through pocket and shirt for added reinforcement.

FLAPS:

Two-piece scalloped design to measure 5 7/8"" across and 2-3/4" in depth at center point, 2-1/4" at sides. Secured to shirtfront approximately 3/8" above pocket. Left flap to have invisible pencil opening 1-1/2" to correspond precisely with pencil slot of pocket. (Stop & start stitching for pencil opening unacceptable and shall be cause for rejection.) Flaps to be 1/4" double needle topstitched. Flaps to have woven interlining of #550 Stabilized Mello-Press. Creased and edge stitched pocket flap construction unacceptable. Under side of the flap to have looped Velcro 3/4" long by 1/2" wide stitched all sides, positioned on outer points of both pocket flaps to secure with corresponding Velcro strips on shirt pocket. Each flap shall have a button centered on uncut sewn buttonhole.

SLEEVES:

Sleeves are to be straight and whole and to have a $\frac{3}{4}$ " hem and to finish at 8 $\frac{3}{4}$ " long from shoulder seam on a size 15.5.

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BUTTONS:

First grade 20-ligne, 4 hole melamine to match color of shirt.

SEWING:

All parts except for the collar are ¹/₄" double needle topstitched, including the yoke. Collar is topstitched ¹/₄" off the edge. Sleeve inserting seams are ¹/₄" double needle stitched. Sleeve closing and side body seams are safety stitched.

THREAD:

All sewing threads to be color fast polyester wrap to match.

INTERLININGS:

Collar shall be interlined with #285 Stabilized MelloPress. Pocket flaps and shoulder straps to be interlined with #550 Stabilized MelloPress.

MILITARY CREASES:

There shall be five sewn-in sharp military creases on all shirts. One crease on each front to be centered vertically. Front creases shall be through pockets and flaps. Spacing for three military creases across shirt back to be proportionate to the size of the shirt.

CONSTRUCTION:

Collar, flaps and straps are made with conventional construction. Top ply, bottom ply and interlining are first stitched together, then turned right side out and finally topstitched.

<u>MEN'S TROUSER SPECIFICATIONS</u> Flying Cross by Fechheimer Item: Iowa DOT – Freedom Flex Men's Trousers

FABRIC:

Content:100% WoolWeight:16.5 oz. per square yardWeave:SergeColor:Castillio Grey

STYLE:

Trouser shall be manufactured from an up-to-date men's uniform trouser pattern. The trouser styling shall be T-1: plain front, two (2) quarter top front pockets, and two (2) hip pockets and (1) club pocket professionally finished with no visible topstitching. Work wear industrial style construction is unacceptable and shall be cause for rejection.

LINING MATERIAL:

The pocketing and fly lining material shall be 70% Polyester / 30% Cotton, 2.9 oz. per square yard (60" width) with a minimum 78 x 48 count. Pocketing must have a durable press finish and the color of the pocketing must be tan.

FREEDOM-FLEX WAISTBAND SYSTEM:

Trouser shall be made with a special Freedom-Flex Waistband System that will allow the wearer waist expansion of 2 1/2" to 3". The waistband shall measure a minimum of 1-7/8" wide when finished. The flexible expansion split portion of the waistband shall be to the front of the trouser side seam and there shall be a 3/4-inch wide side belt loop positioned to 'hide" the expansion split of the waistband.

The waistband curtain shall consist of two different styles for maximum waistband expansion to enhance wearer comfort, fit, and appearance. The front of the trouser (to the expansion split) waistband curtain style shall consist of a 2-inch wide elastic section that incorporates Tru-Grip, a $\frac{1}{2}$ " surface area composed of thin 55 gauge rubber for maximum comfort and performance. The Tru-Grip acts to help keep shirts tucked in securely. (Use of a single silicone strip or strips instead of $\frac{1}{2}$ " wide rubberized surface area shall be cause for rejection.)

The back half of the trouser waistband curtain shall finish a minimum 2-1/8" wide and is to be made of black pocketing material and shall be attached to the top of the trouser with a zigzag stitch. The waistband curtain must also contain Tru-Grip and will line up with the Tru-Grip on the front of the expansion split. (Substitution of a silicone strip or strips in place of Tru-Grip shall not be acceptable and shall be cause for rejection.)

The waistband curtain is composed of a wet laid non-woven canvas weighing 3.3 oz. per square yard. The canvas is covered in the same color and material as the pocketing. The $\frac{1}{2}$ " rubberized surface area is positioned 1- $\frac{1}{4}$ " up from the bottom of the curtain.

The specifications for the rubberized Tru-Grip curtain are as follows:

Width: 1-1/8-inch Warp: 300 Denier Texturized Polyester Filling: 300 Denier Texturized Polyester Rubber: 55 Gauge Men's Trouser Specification (Iowa DOT - Freedom Flex Men's Trousers) Page 2 of 3

Count: 32-36 yarns per inch Contents: 59% Polyester/41% Rubber

To complete the Freedom-Flex Waistband System, there shall be a 1-1/4" wide elastic component sewn into the back half of the waistband curtain to allow for the stretch and recovery of the waistband to comfortably fit the wearer's waist size. There shall be a bartack for strength and durability sewn at the stress point on the waistband where it joins the front elasticized waistband curtain joining stitching (positioned, on the waistband above the front pocket.)

The waistband closure shall be accomplished with one crush proof hook and eye centered on the waistband for wearer comfort. The hook and eye shall be reinforced with a 7/8" non-woven tape that is anchored with topstitching through and through to the top of the waistband (bartacks in place of topstitching shall be cause for rejection). In addition to the stitching of the waistband when it is set onto the trouser, the waistband must also be topstitched below the waistband seam of the trouser to be finished to allow for alterations (with ample fabric and curtain material to allow trouser size to be increased at least one size). The outlet in the seat is to be proportional to the waist outlet so the seat may also be let out. Seat seam must be sewn with a tandem needle machine (double-needle stitch) for maximum stretch.

BELT LOOPS:

There shall be a minimum of seven belt loops 1 1/4" in width of double thickness. Each loop must have a non-woven interlining for added durability. All loops (except back center) must be sewn into the top and bottom of the waistband ("dropped" belt loops that are tacked to the outside of the trouser all around waist shall be cause for rejection). The top of the belt loops (except back center) shall be sewn into the waistband curtain seam with a Rocap machine using a zigzag stitch. The bottom of the center back loop shall be tacked to the trouser and the top of the loop tacked to the outside of the waistband to allow for easier waist alteration.



POCKETS:

The two (2) front pockets will be quarter top style with a minimum opening of 6" and a minimum depth of 5-3/4" measured from the bottom of the opening. Front pockets to have firm straight bartacks at top and bottom of pocket openings. Pockets shall be constructed using the stitch, turn, and topstitch method. Front pocket facings to be made of the basic trouser fabric shall be a minimum of 1". Front pocket barrier shall also be made of the basic trouser fabric and to measure a minimum of 2" (measured to the inside edge of pocket lining).

The two (2) hip pockets shall have a minimum 5-3/8" wide (bartack to bartack) opening and a minimum depth of 5-3/4 " measured from the bottom of the pocket opening. Hip pockets shall be constructed using



the double welt method on an automatic welt machine. The welts shall be finished in such a manner that there is no topstitching (topstitched hip pockets shall be cause for rejection). The corners of the hip pocket openings shall have straight bartacks for reinforcement (use of triangular bartacks shall be cause for rejection). Hip pocket facing to be made of basic trouser fabric and shall be a minimum of 3/4" and the barrier shall also be made of the basic trouser fabric and to be a minimum of 1-1/2". The left hip pocket shall have a centered tab made of basic trouser fabric inserted into the top welt with bartacks at the top and bottom of the tab to form an opening for a button. A button shall be located below the bottom welt corresponding in

location with the tab, which shall be interlined with non-woven for added durability. There shall be a dart centered above each hip pocket to waistband. Dart shall be approximately 2-3/4" long tapered from 3/8" at waistband and shall be installed with automatic equipment for a clean non-puckered finish.

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The one (1) club pocket shall measure 3 ¹/₂" opening and 6" deep placed 4" down from bottom of quarter top pocket, on left side seam (cut into stripe).

<u>FLY</u>:



Trouser shall have a brass metal zipper with memory lock brass slider secured by metal stopper at base. There shall be a French Fly tab closure on the inside of the right fly. The tab shall be double ply made of the basic trouser fabric (tabs made of pocketing material or a "grown on" French Fly will be cause for rejection). The right fly shall be lined with the same fabric and color as the pocketing. The fly lining shall be sewn to the left fly continuing below the zipper into the crotch area in a neat and durable manner. A button shall be located on the left fly corresponding with the French Fly tab to provide a clean and comfortable closure. Topstitching of fly to be installed with automatic "J" stitch equipment eliminating puckering and providing a clean finish. There shall be a firm straight bartack at the bottom of the fly going through the zipper

tape for maximum strength. Bartack shall line up with starting point of "J" stitch.

STRIPE:

Trousers shall have 1 ¹/₄" stripe to the waistband sewn into the side seam made of black (645-561).

SEAT:

Seat must be sewn with a Tandem Needle Machine (double-needle stitch) for maximum durability.

STITCHING, PRESSING & FINISHING:

Trouser must be stitched with matching thread. Trouser must be neatly pressed on Hothead Presses and properly shaped. Outseams and inseams are edge serged on automatic equipment for uniformity of quality and shall be pressed open for a smooth pucker-free finish with repeated cleaning and pressing. Trouser must be cleaned and finished to eliminate loose threads.



LABELS:

Trouser must have a permanent label providing care instructions and small woven label indicating waist size. A removable paper ticket showing the size, fabric content, cut number, and WPL or RN number must be on the outside of the waistband. Ticket to be matchbook style installed with plastic staples for easy removal without damaging trouser material and showing size when trousers are stacked.

WOMEN'S TROUSER SPECIFICATIONS

Flying Cross by Fechheimer Item: Iowa DOT - Freedom Flex Women's Trousers

FABRIC:

Content:100% WoolWeight:16.5 oz. per square yardWeave:SergeColor:Castillio Grey

STYLE:

Trouser shall be manufactured from an up-to-date ladies uniform trouser pattern. The trouser styling shall be T-1: plain front, two (2) quarter top front pockets, and two (2) hip pockets and (1) club pocket professionally finished with no visible topstitching. Work wear industrial style construction is unacceptable and shall be cause for rejection.



LINING MATERIAL:

The pocketing and fly lining material shall be 70% Polyester / 30% Cotton, 2.9 oz. per square yard (60" width) with a minimum 78 x 48 count. Pocketing must have a durable press finish and the color of the pocketing must be tan.

FREEDOM-FLEX WAISTBAND SYSTEM:

Trouser shall be made with a special Freedom-Flex Waistband System that will allow the wearer waist expansion of 2 1/2" to 3". The waistband shall measure a minimum of 1-7/8" wide when finished. The flexible expansion split portion of the waistband shall be to the front of the trouser side seam and there shall be a 3/4-inch wide side belt loop positioned to 'hide" the expansion split of the waistband.

The waistband curtain shall consist of two different styles for maximum waistband expansion to enhance wearer comfort, fit, and appearance. The front of the trouser (to the expansion split) waistband curtain style shall consist of a 2-inch wide elastic section that incorporates Tru-Grip, a ¹/₂" surface area composed of thin 55 gauge rubber for maximum comfort and performance. The Tru-Grip acts to help keep shirts tucked in securely. (Use of a single silicone strip or strips instead of ¹/₂" wide rubberized surface area shall be cause for rejection.)

The back half of the trouser waistband curtain shall finish a minimum 2-1/8" wide and is to be made of black pocketing material and shall be attached to the top of the trouser with a zigzag stitch. The waistband curtain must also contain Tru-Grip and will line up with the Tru-Grip on the front of the expansion split. (Substitution of a silicone strip or strips in place of Tru-Grip shall not be acceptable and shall be cause for rejection.)

The waistband curtain is composed of a wet laid non-woven canvas weighing 3.3 oz. per square yard. The canvas is covered in the same color and material as the pocketing. The $\frac{1}{2}$ " rubberized surface area is positioned 1- $\frac{1}{4}$ " up from the bottom of the curtain.

The specifications for the rubberized Tru-Grip curtain are as follows:

Width: 1-1/8-inch Warp: 300 Denier Texturized Polyester Filling: 300 Denier Texturized Polyester Ladies Trouser Specification (Iowa DOT - Freedom Flex Ladies Trousers) Page 2 of 3

Rubber: 55 Gauge Count: 32-36 yarns per inch Contents: 59% Polyester/41% Rubber

To complete the Freedom-Flex Waistband System, there shall be a 1-1/4" wide elastic component sewn into the back half of the waistband curtain to allow for the stretch and recovery of the waistband to comfortably fit the wearer's waist size. There shall be a bartack for strength and durability sewn at the stress point on the waistband where it joins the front elasticized waistband curtain joining stitching (positioned, on the waistband above the front pocket.)

The waistband closure shall be accomplished with one crush proof hook and eye centered on the waistband for wearer comfort. The hook and eye shall be reinforced with a 7/8" non-woven tape that is anchored with topstitching through and through to the top of the waistband (bartacks in place of topstitching shall be cause for rejection). In addition to the stitching of the waistband when it is set onto the trouser, the waistband must also be topstitched below the waistband seam of the trouser to be finished to allow for alterations (with ample fabric and curtain material to allow trouser size to be increased at least one size). The outlet in the seat is to be proportional to the waist outlet so the seat may also be let out. Seat seam must be sewn with a tandem needle machine (double-needle stitch) for maximum stretch.

BELT LOOPS:

There shall be a minimum of seven belt loops 1 1/4" in width of double thickness. Each loop must have a non-woven interlining for added durability. All loops (except back center) must be sewn into the top and bottom of the waistband ("dropped" belt loops that are tacked to the outside of the trouser all around waist shall be cause for rejection). The top of the belt loops (except back center) shall be sewn into the waistband curtain seam with a Rocap machine using a zigzag stitch. The bottom of the center back loop shall be tacked to the trouser and the top of the loop tacked to the outside of the waistband to allow for easier waist alteration.



POCKETS:

The two (2) front pockets will be quarter top style with a minimum opening of 6" and a minimum depth of 5-3/4" measured from the bottom of the opening. Front pockets to have firm straight bartacks at top and bottom of pocket openings. Pockets shall be constructed using the stitch, turn, and topstitch method. Front pocket facings to be made of the basic trouser fabric shall be a minimum of 1". Front pocket barrier shall also be made of the basic trouser fabric and to measure a minimum of 2" (measured to the inside edge of pocket lining).

The two (2) hip pockets shall have a minimum 5-3/8" wide (bartack to bartack) opening and a minimum depth of 5-3/4 " measured from the bottom of the pocket opening. Hip pockets shall be constructed using



the double welt method on an automatic welt machine. The welts shall be finished in such a manner that there is no topstitching (topstitched hip pockets shall be cause for rejection). The corners of the hip pocket openings shall have straight bartacks for reinforcement (use of triangular bartacks shall be cause for rejection). Hip pocket facing to be made of basic trouser fabric and shall be a minimum of 3/4" and the barrier shall also be made of the basic trouser fabric and to be a minimum of 1-1/2". The left hip pocket shall have a centered tab made of basic trouser fabric inserted into the top welt with bartacks at the top and bottom of the tab to form an opening for a button. A button shall be located below the bottom

welt corresponding in location with the tab, which shall be interlined with non-woven for added durability. There shall be a dart centered above each hip pocket to waistband. Dart shall be approximately 2-3/4" long

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tapered from 3/8" at waistband and shall be installed with automatic equipment for a clean non-puckered finish.

The one (1) club pocket shall measure 3 ¹/₂" opening and 6" deep placed 4" down from bottom of quarter top pocket, on left side seam (cut into stripe).

<u>FLY</u>:



Trouser shall have a brass metal zipper with memory lock brass slider secured by metal stopper at base. There shall be a French Fly tab closure on the inside of the right fly. The tab shall be double ply made of the basic trouser fabric (tabs made of pocketing material or a "grown on" French Fly will be cause for rejection). The right fly shall be lined with the same fabric and color as the pocketing. The fly lining shall be sewn to the left fly continuing below the zipper into the crotch area in a neat and durable manner. A button shall be located on the left fly corresponding with the French Fly tab to provide a clean and comfortable closure. Topstitching of fly to be installed with automatic "J" stitch equipment eliminating puckering and providing a clean finish. There shall be a firm

straight bartack at the bottom of the fly going through the zipper tape for maximum strength. Bartack shall line up with starting point of "J" stitch.

STRIPE:

Trousers shall have 1 ¹/₄" stripe to the waistband sewn into the side seam made of black (645-561).

SEAT:

Seat must be sewn with a Tandem Needle Machine (double-needle stitch) for maximum durability.

STITCHING, PRESSING & FINISHING:

Trouser must be stitched with matching thread. Trouser must be neatly pressed on Hothead Presses and properly shaped. Outseams and inseams are edge serged on automatic equipment for uniformity of quality and shall be pressed open for a smooth pucker-free finish with repeated cleaning and pressing. Trouser must be cleaned and finished to eliminate loose threads.



LABELS:

Trouser must have a permanent label providing care instructions and small woven label indicating waist size. A removable paper ticket showing the size, fabric content, cut number, and WPL or RN number must be on the outside of the waistband. Ticket to be matchbook style installed with plastic staples for easy removal without damaging trouser material and showing size when trousers are stacked.