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Gatineau, Québec K1A 0S5

Bid Fax: (819) 997-9776

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise
indicated, all other terms and conditions of the Solicitation
remain the same.

Ce document est par la présente révisé; sauf indication contraire,
les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address

Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Clothing and Textiles Division / Division des vêtements
et des textiles

L'Esplanade Laurier,

East Tower 7th Floor

Tour est 7e étage

140 O'Connor, rue O'Connor,

Ottawa

Ontario

K1A 0R5

Title - Sujet SBA CARRIER EXT	
Solicitation No. - N° de l'invitation M7594-195473/A	Amendment No. - N° modif. 001
Client Reference No. - N° de référence du client M7594-195473	Date 2019-04-16
GETS Reference No. - N° de référence de SEAG PW-\$\$PR-766-76790	
File No. - N° de dossier pr766.M7594-195473	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-04-23	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Baker, Johanne	Buyer Id - Id de l'acheteur pr766
Telephone No. - N° de téléphone (613) 854-9253 ()	FAX No. - N° de FAX (613) 943-7970
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

AMENDMENT 001

The Solicitation Amendment 001 is raised in regards to the following:

1. To provide the answers to the bidders questions.

Question 1:

In reference to Section 4.1.10 (Fusing), on specification G.S. 1045-360 and G.S. 1045-368, suppliers have advised us that the 500 Denier rip stop fabric as identified in Table I cannot be fused due to the urethane coating. The properties of 500 Denier fabric makes fusing unnecessary.

Answer 1:

The fusing will be replaced with an extra layer of shell material for reinforcement. The specification is amended accordingly.

Question 2:

In reference to Section 4.1.7.1 (Elastic, back and cummerbund), will a knitted polyester blend elastic be acceptable?

Answer 2:

Knitted elastic is not acceptable. The elastic must be as specified in paragraph 4.1.7 of both specification G.S. 1045-360 and G.S. 1045-368.

2. Specifications G.S. 1045-360 and G.S. 1045-368

Delete:

Specifications G.S. 1045-360 and G.S. 1045-368 dated 2018-12-21

Insert:

Specifications G.S. 1045-360 and G.S. 1045-368 dated 2019-04-15

All other terms and conditions remain the same.

A bid already submitted may be amended prior to RFP closing time by sending the amended correspondence to Bid Receiving Unit, the envelope/message bearing the PWGSC file number and the most current closing date.



Royal Canadian Mounted Police
Gendarmerie royale du Canada

Doc. no: G.S. 1045-360
Date: 2019-04-15

Specification

Soft Body Armour, Carrier, External, Flat Panels

This document has 37 pages including the drawings.

This document was created in English.

The document is available in English and French.

☒ English/Anglais
Français/French

The photograph on this page is for reference only.



Modifications

[illegible]

RCMP VIEWING SAMPLE

A viewing sample, when available, will be supplied to the successful bidder.

This will be used for the guidance of the manufacturer in all factors not covered by this specification or referred to therein. Variation from the specification may appear in the sample in which case the specification must govern.

It may be obtained from:

Royal Canadian Mounted Police
ATTN: Uniform & Equipment Program
(440 Coventry Road, Warehouse Building)
73 Leikin Drive
Ottawa, Ontario
K1A 0R2

It will be sent “prepaid” and is to be returned “prepaid”.

The viewing sample must be returned to the RCMP in the same condition as received by the manufacturer. Lost or damaged viewing samples must be replaced by an identical item or the RCMP must be reimbursed for the cost of an acceptable replacement.

SPECIFICATION

Soft Body Armour, Carrier, External, Flat Panels

1. Definition

- 1.1 This specification must govern the manufacture and inspection of the Soft Body Armour, Carrier, External, Flat Panels. The specific items covered under this specification with stock number are as follows:
- i. 8075 – Soft Body Armour, Carrier, External, Flat Panels, Stock size / Gilet pare-balles extérieur pour panneaux balistiques souples plats, en stock
 - ii. 8077-100 – Soft Body Armour, Carrier, External, Flat Panels, Non-stock size / Gilet pare-balles extérieur pour panneaux balistiques souples plats, hors stock
- 1.2 This specification, patterns, viewing sample or other information issued in connection therewith, may only be used for specific enquiries, solicitations, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for Carrier, External, Load Carrying, Male.
- 1.4 This specification has been translated into French from this original English language document.

2. Applicable Specifications

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the solicitation, unless otherwise specified.
- 2.2 **Canadian General Standards Board (CAN/CGSB);**
- | | |
|-------------------------|--|
| 4.2 No. 5.1-M90 (R2013) | Textile test methods – Unit mass of fabrics |
| 4.2 No. 6-2013 | Textile test methods – Woven Fabrics, Determination of number of threads per unit length |
| 4.2 No. 9.2-M90 (R2013) | Textile test methods – Breaking strength of fabrics grab method |
| 4.2 No. 12.1-2016 | Textile test methods – Tearing strength – Single rip method |
| 4.2 No. 14-2005 | Textile test methods – Quantitative Analysis of Fibre Mixtures |

- | | |
|---------------------------|--|
| 4.2 No. 19.1-2004 (R2013) | Textile test methods – Colourfastness to washing, Accelerated test |
| 4.2 No. 22-2004 (R2013) | Textile test methods – Colourfastness to rubbing (Crocking) |
| 4.2 No. 23-M90 (R2013) | Textile test methods – Colourfastness to perspiration |
| 4.2 No. 58-2004 | Textile test methods – Dimensional change in domestic laundering of textiles |
| 86.1-2003 | Care Labelling of Textiles |
- 2.3 **General Services Administration – US Government**
- Commercial Item Description**
- | | |
|------------|--|
| A-A-50199A | Thread, Polyester Core, Cotton or Polyester-Covered. |
| A-A-59826A | Thread, Nylon |
- 2.4 **Royal Canadian Mounted Police Specification (RCMP)**
- | | |
|---------------|-------------------------------|
| G.S. 1045-177 | Soft Body Armour, Flat Panels |
|---------------|-------------------------------|
- 2.5 **American Society for Testing and Materials (ASTM)**
- | | |
|--------------------------|---|
| D1777-96 (2015) | Standard Test Method for Thickness of Textile Materials |
| D3776/D3776M-09a (R2013) | Standard Test Method for Mass per Unit Area (Weight) of Fabric |
| D4966-12 (R2016) | Standard Test Method for Abrasion Resistance of Textile Fabrics (Martindale Abrasion Tester Method) |
| D5034-09 (R2013) | Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test) |
| D5169-98 (2015) | Standard Test Method for Shear Strength (Dynamic Method) of Hook and Loop Touch Fasteners |
| D5170-98 (2015) | Standard Test Method for Peel Strength (“T” Method) of Hook and Loop Touch Fasteners |
| D8007-15 ^{e1} | Standard Test Method for Wale and Course Count of Weft Knitted Fabrics |
- 2.6 **American Association of Textile Chemists and Colorists (AATCC)**
- | | |
|---------------------|---|
| Test Method 8-2016 | Colourfastness to Crocking: Crockmeter method |
| Test Method 15-2013 | Colourfastness to Perspiration |
| Test Method 22-2017 | Water Repellency: Spray Test |

Test Method 61-2013	Colourfastness to Laundering: Accelerated
Test Method 135-2014	Dimensional Changes of Fabrics after Home Laundering

2.7 **General Services Administration – US Government**

Federal Standard, Textile Test Methods; (FED-STD No. 191A)

Method 4108	Strength and Elongation, Breaking; Textile Webbing, Tape and Braided Items
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2.8 **International Standards Organization (ISO)**

105-B02:2014	Colourfastness to artificial light: Xenon arc fading lamp test
105-C10:2006 (2015)	Colourfastness to washing with soap or soap and soda
105-E04:2013	Colourfastness to perspiration
105-X12:2016	Colourfastness to rubbing (Crocking)
4920:2012	Textile fabrics — Determination of resistance to surface wetting (spray test)
6330:2012	Domestic washing and drying procedures for textile testing
7211-2:1984	Textiles Woven fabrics – Construction – Methods of analysis Part 2: Determination of number of threads per unit length

3. **General Requirements**

- 3.1 The article or material covered by this specification must be free from material and manufacturing defects that may affect its appearance or serviceability. In all particulars not covered by this specification or contract documents, production must be equivalent in all respects to the viewing sample.
- 3.2 **Design** – The Soft Body Armour, Carrier, External, Flat Panels must be a two piece, vest-like, garment which will be used to carry RCMP issue ballistic body armour panels as specified in para. 2.4. The carrier must consist of a front and back and are joined by an internal cummerbund and an external waist strap and adjustable shoulder straps. The carrier must come with chest pockets, permanent POLICE identification markings, and MOLLE attachment webbing on the front and external waist straps.

4. **Detail Requirements**

4.1 **Components**

4.1.1 **Shell Material** – The shell material must be a dark navy in colour, 100% nylon, 500 denier ripstop fabric meeting the requirements outlined in Table I. Brookwood product Westridge #FC0500RB has been known to meet the above requirements.

4.1.2 **Lining Material** – The lining must be a spacer mesh black in colour, 100% Polyester fabric, meeting the requirements of Table II. Gehring Textiles style SHR846 has been known to meet the requirement.

4.1.3 **Nylon Webbing**

4.1.3.1 **Webbing, Accessory & Microphone Strap** – The webbing must be a durable nylon webbing, luggage quality, black in colour measuring 2.54 cm (1”) wide and 0.04” ± 0.01” thick. It must have a minimum tensile strength of 1000 lbs. as per Federal Standard 191A test method #4108 and be equal in appearance to the viewing sample. Tape Craft #N0015S-1”-YD001-352 has been known to meet the requirements.

4.1.3.2 **Nylon Webbing, Flap Attachment Tab** - The webbing shall be a durable nylon webbing, luggage quality, black in colour measuring 3.8 cm (1.5”) wide and 0.043” ± 0.01” thick. It shall have a minimum tensile strength of 1500 lbs. as per Federal Standard 191A test method #4108 and be equal in appearance to the viewing sample. Tape Craft #N0015S has been known to meet the requirements.

4.1.4 **Thread**

4.1.4.1 **Seam and Stitching Thread** – The thread must be polyester wrap, polyester core, Tex 50, Type II of matching colour to the shell material, meeting U.S. government standard A-A-50199A.

4.1.4.2 **Reinforce Stitching Thread** – The thread must be a nylon continuous filament bonded, Class A, Type II, size B (Tex 45), meeting U.S. government standard A-A-59826A. It must be black in colour.

4.1.5 **Hook and Loop Tape** – The hook and loop tape must be nylon, black in colour, with a high life cycle. The combined hook and loop must have no less than 8 P.S.I

length-wise shear strength with initial peel strength of not less than 1 P.I.W. when tested to ASTM D5169-98 (2015), standard test method for shear strength [dynamic method] of hook and loop touch fasteners and ASTM D5170-98 (2015), standard test method for peel strength ["T" method] of hook and loop touch fasteners. Dimensions must be as per drawings and pattern template.

4.1.6 **Slide Fastener**

4.1.6.1 **Horizontal Chest Pockets** – The slide fastener must be a 2-way closed end slide fastener, black in colour with auto-locking sliders, two arranged in a head to head relation with one opening to the left and one opening to the right. YKK 13094 CIFMC 59/9 DS6YG C5/DS6YG C5 5/8*BTM-2*H-H* (only). The slide fastener must be available in 6 lengths, 7½", 8", 8½", 9", 9½" and 10".

4.1.6.2 **Interior Access Panel** – The slide fastener must be a 1-way reverse coil closed end slide fastener, black in colour with an auto-locking slider. YKK 61351 5CI 5/8 CHAIN *200 MTS/RL*, and 75492 5CN DS6B C5 SLIDER (only). The slide fastener must be available in 5 lengths, 14½", 16½", 19½", 21½" and 24".

4.1.7 **Elastic**

4.1.7.1 **Elastic, Back and Cummerbund** – The elastic must be heavy duty woven elastic, with a composition of at least 70% polyester blended with rubber and a medium finish. The elastic must be black in colour, with a stretch and recovery as per component viewing samples. It must be available in five widths: 10.2 cm (4"), 12.7 cm (5"), 15.2 cm (6") or 17.8 cm (7") or 20.3 cm (8") wide.

4.1.7.2 **Elastic, Attachment Strap** – The attachment strap must be heavy duty woven elastic, with a composition of at least 70% polyester blended with rubber and a medium finish. The elastic must be black in colour, 5 cm (2") wide with a stretch and recovery as per component viewing sample.

4.1.8 **Binding Tape** – The binding tape must be heavy duty nylon, grosgrain binding tape, black in colour, 2.54 cm wide and 0.3 mm thickness.

4.1.9 **Neoprene Padding** – The neoprene padding must be made of 100% Nylon on the outer surface and 10% Nylon/ 90% Neoprene as the inner content. It must be 725 g/m² ± 25 g/m², 2.5 mm thick, black in colour.

- 4.1.10 **Heat Transfer Vinyl** – The heat transfer vinyl used for the police markings must be a polyurethane composition. The thickness must be 80 microns (.08 mm) with a stretch and rebound of 3. The vinyl must withstand 50 home launderings after application.
- 4.2 **Size and Dimensions** – The Soft Body Armour, Carrier, External, Flat Panels must be supplied in the sizes specified by the RCMP and to the dimensions given in the scale of measurements forming part of this specification. There are two categories of sizes; stock sizes and non-stock sizes. The stock size scale of measurements under stock number 8075 form part of this specification. The scale of measurements for non-stock sizes are provided in document *360 Soft Body Armour, Carrier, External, Flat Panels – 8077 Non – Stock Sizes*. The Non-Stock size roll is extensive and is an extension of the stock sizes and includes evenly graded chest, waist and front length measurements to accommodate all body shapes. The first two digits of the five digit size designation represent the chest measurement. The Soft Body Armour, Carrier, External, Flat Panels, Stock and Non-Stock components must be shaped, dimensioned and positioned in accordance with the pattern components and pattern requirements as outlined in Appendix A forming part of this specification.
- 4.3 **Construction**
- 4.3.1 **Stitching** – All stitching must be lockstitch. There must be no less than three or more than four stitches per centimeter. The beginning and ending of all stitching must be securely backstitch tacked, unless secured by other stitching. Where seaming, turning and stitching are required the edges must be properly worked out before stitching. Care must be taken to minimize unsightly gathering and puckering. Ball point needles must be used for all stitching through elastic components.
- 4.3.2 **Body**
- 4.3.2.1 **Front Pouch – Front View** – The front pouch must be made from the shell material specified in para. 4.1.1, lined with shell material and the lining material specified in para. 4.1.2, and must be sized and shaped to the pattern and the scale of measurements. The shoulder strap portions must have hook tape as specified in para. 4.1.5 for shoulder closure and adjustment. The hook tape must be 5 cm wide by the finished length specified in the component scale of measurements for the appropriate size and be positioned on the face of the shell material at the shoulder edge as per drawing 2. The name tag must be loop tape as per para. 4.1.5, 8.5 cm \pm 0.2 cm long by 2.5 cm wide and positioned on the right front as per the patterns

and drawing 2. There must be a POLICE marking as specified in para. 4.3.7 and 4.3.7.1 permanently adhered to the shell material. The marking must be centred between the side edges of the pouch and centred between the centre of the lower pocket and the top edge of the flap. The lower front portion of the pouch must have one piece of loop tape centred horizontally and sewn as dimensioned and placed as per pattern template. The loop tape must have sealed edges to prevent fraying. The loop tape must be secured to the pouch with two rows of stitching using a 3 mm and 6 mm gauge along all edges. The bottom edge of each corner of the loop tape must be bar tacked with a 15 mm to 20 mm long bar tack, with no less than 18 cover stitches as per drawing 4.

4.3.2.2 **Front Pouch Chest Pockets** – The front of the external carrier must have two horizontal chest pockets one above the other secured by the slide fastener specified in para. 4.1.6.1. Refer to the component scale of measurements for the appropriate length by size. Each end of the horizontal pocket openings must be bar tacked with 15 mm to 20 mm long bar tacks, with no less than 18 cover stitches as per drawing 2. Inside the top chest pocket must be a notebook pocket and a pen loop dimensioned as per the pattern and drawing 7.

4.3.2.3 **Front Pouch Flap** – The front flap must be made of shell material as specified in para 4.1.1 and must have an extra layer of shell material used as an interlining for reinforcement. The front flap must have 4 pieces of hook tape dimensioned as per pattern template, placed on the underside of the flap, positioned according to drawing 3. Depending on the size of the carrier, the front flap must have 3 or 4 rows of webbing as specified in para. 4.1.3.1 and placed as per the pattern template. Refer to the scale of measurements for the number of rows by size. Each row of webbing must be secured with vertical reinforced zig zag stitching 3 mm wide at intervals of $3.8\text{ cm} \pm 0.1\text{ cm}$ across the flap through all layers as per pattern template and drawings 2 and 3. The reinforced stitching must be done using thread as specified in para. 4.1.4.2. Care must be taken to ensure the webbing does not pull or buckle and that there are no broken or dropped stitches when the reinforced stitching is done to secure the webbing. The finished flap must be secured to the pouch with two rows of stitching using a 3 mm and 6 mm gauge along the flap's top edge. The top edge of each corner of the flap must be bar tacked with a 15 mm to 20 mm long bar tack, with no less than 18 cover stitches as per drawing 2.

4.3.2.4 **Front Pouch Attachment Tab** – There must be attachment tabs sewn between the flap layers at the bottom corners of the front flap. The attachment tabs must be made with nylon webbing as specified in para. 4.1.3.2 with a finished dimension of $3.8\text{ cm} \times 7.5\text{ cm} \pm 0.2\text{ cm}$. The attachment tabs must have a finger loop and a piece of hook tape as specified in para. 4.1.5 measuring $3.8\text{ cm} \times 4.5\text{ cm} \pm 0.2\text{ cm}$ sewn to

the back side of the tab. The attachment tabs must be constructed and dimensioned as per drawing 3.

4.3.2.5 **Front Pouch – Back View** – The back of the front pouch must be made with shell material as specified in para. 4.1.1 and lining material specified in para. 4.1.2 and must be shaped and dimensioned as per pattern. The lining must be bound with the binding tape as specified in para. 4.1.8 around all edges and then sewn on top of the shell material as per drawing 2. The upper and lower facing must be made from shell material as specified in para. 4.1.1. There must be two pieces of loop tape measuring 3.8 cm x 5 cm \pm 0.2 cm positioned at the bottom of the lower piece as per the pattern template and drawing 2. The back view of the pouch must have a slide fastener as per drawing 10. Refer to the component scale of measurements for the appropriate slide fastener length by size. The slide fastener must be as specified in para. 4.1.6.2. If stoppers are not being used on the slide fastener, then there must be two layers of vertical stitching through all layers to secure the slide fastener as per drawing 10. The marking and cleaning instructions label as specified in para. 4.3.8 must be sewn to the slide fastener seam as per drawing 2 on the inside of the opening. Inside the pouch at each shoulder strap is an attachment strap as per para. 4.3.5.

4.3.2.6 **Back Pouch – Front View** – The back pouch front view must be made from the shell material specified in para. 4.1.1 and must be sized and shaped to the scale of measurements and pattern. The front view is two pieces. The lower back is sewn to the upper back piece across the back at the armhole level creating a loose end. The side edges of the loose end must be double folded and topstitched the full length using an 8 mm gauge. At the double folded edge where the upper back loose end overlaps the lower piece near the stitching line, the upper back folded seam must be topstitched to the lower back piece from the armhole seam to within 0.5 cm of the waist strap using a 3 mm gauge. There must be 2 cm long bar tacks, with no less than 18 cover stitches, starting 0.5 cm from the top of the waist strap and from the bottom of the waist strap as per drawing 5. Under the cover at the center back, a side waist strap as specified in para. 4.3.4 must be stitched securely with a triple row of stitching and three, 1 cm long bar tacks with no less than 18 cover stitches must be installed in the middle and at each end of the stitching as per drawing 5. At the shoulder strap, there must be webbing as specified in para. 4.1.3.1, sewn 1.2 cm \pm 0.2 cm from the edge. The total length of the webbing must fit across shoulder strap and be sewn on top at each seam to create a loop. The webbing ends must be sealed to prevent fraying. There must be a POLICE marking as specified in para. 4.3.7 and 4.3.7.1 permanently adhered to the shell material. The marking must be centered between the sides of the pouch and be placed 5 cm \pm 0.5 cm below the back neckline. There must be a cummerbund as specified in para. 4.3.3

dimensioned as per pattern sewn into the side seams of the back pouch as per pattern placement.

- 4.3.2.7 **Back Pouch – Back View** – The body side of the back pouch must be made with shell material as specified in para. 4.1.1 and lining material specified in para. 4.1.2 and must be shaped and dimensioned as per pattern. The lining must be bound with the binding tape as specified in para. 4.1.8 around all edges and then sewn on top of the shell material as per drawing 6. The upper and lower facing must be made from shell material as specified in para. 4.1.1. The back view of the pouch must have a slide fastener as per drawing 10. Refer to the component scale of measurements for the appropriate slide fastener length by size. The slide fastener must be as specified in para. 4.1.6.2. If stoppers are not being used on the slide fastener, then there must be two layers of vertical stitching through all layers to secure the slide fastener as per drawing 10. The marking and cleaning instructions label as specified in para. 4.3.8 must be sewn to the slide fastener seam as per drawing 6 on the inside of the opening. Inside the pouch at each shoulder strap is an attachment strap as per para. 4.3.5. Loop tape, 5 cm wide, must be applied to the body side of the shoulder strap as per drawing 8. Refer to the component scale of measurements for the appropriate length by size. The loop tape must be placed in line with the shoulder top edge.
- 4.3.3 **Cummerbund** – The cummerbund must be made of a double layer of elastic as specified in para. 4.1.7.1. Refer to the component scale of measurements for the appropriate elastic width by size. The right cummerbund must have hook tape as specified in para. 4.1.5, 10.2 cm \pm 0.5 cm in length by the width of the elastic sewn on top of the elastic. The elastic must be inserted into the back pouch side seam with the hook tape facing the back pouch front view when laid flat. The left cummerbund must have loop tape as specified in para. 4.1.5, 10.2 cm \pm 0.5 cm in length by the width of the elastic is sewn on the top of the elastic. There must be an extension grip made of shell material as specified in para. 4.1.1 dimensioned as per the pattern inserted between the folded edge of elastic and the loop tape as per drawing 9. The elastic must be inserted into the back pouch side seam with the loop tape facing the back pouch back view when laid flat. Refer to drawing 6 for placement.
- 4.3.4 **Side Waist Strap** – The side waist strap must be made of a double layer of elastic as specified in para. 4.1.7.1, shell material as specified in para 4.1.1 and must have an extra layer of shell material used as an interlining for reinforcement. The waist strap must be sized and shaped as per the pattern. Each end of the double elastic must be joined to one end of the waist strap. The waist strap must have 3 rows of

webbing as specified in para. 4.1.3.1 and placed as per pattern template. Each row of webbing must be secured with vertical reinforced zig zag stitching 3 mm wide at intervals of $3.8 \text{ cm} \pm 0.1 \text{ cm}$ across the webbing through all layers as per drawings 5 and 6. The reinforced stitching must be done using thread as specified in para. 4.1.4.2. Care must be taken to ensure the webbing does not distort the shell material and that there are no broken or dropped stitches when the reinforced stitching is done to secure the webbing. Both ends of the waist strap must have a piece of loop tape next to the webbing and a piece of hook tape on the opposite side. Refer to drawings 5 and 6 and the pattern template for size and placement. Refer to the component scale of measurements for the appropriate elastic width by size.

- 4.3.5 **Attachment Straps** – Inside the front and back pouch at each shoulder strap is an attachment strap to hold the ballistic panel in place. The attachment strap must measure 5 cm wide by the finished length specified in the component scale of measurements for the appropriate size and be positioned as per the pattern template. The top portion of the attachment strap must be made from elastic as specified in para. 4.1.7.2 and must measure $10 \text{ cm} \pm 0.5 \text{ cm}$ in length. The bottom portion of the attachment strap must be made from loop tape as specified in para. 4.1.5. The loop tape must measure 5 cm wide by the length specified in the component scale of measurements. The loop tape must be stitched to the elastic and overlap by $2 \text{ cm} \pm 0.2 \text{ cm}$. The loop tape surface must face the body side to ensure proper adherence to the ballistic panels. On the front pouch, the first 5 cm of elastic must be stitched to the back side of the front view shell material. On the back pouch, the first 5 cm of elastic must be stitched to the back side of the back view or may be stitched through to the front view. It must be stitched in a box and 'X' pattern within the lower stitching line as per the pattern template and drawing 8.
- 4.3.6 **Removable Shoulder Padding** – There must be a removable shoulder pad for each shoulder strap, 5 mm thick with $\pm 1 \text{ mm}$ tolerance made from 2 layers of neoprene as specified in para. 4.1.9 and covered with black nylon fabric. The shoulder padding must be inserted in each front shoulder strap, between the shell and the mesh lining. It must be sized as $4.8 \text{ cm} \pm 0.5 \text{ cm}$ wide by $15.2 \text{ cm} \pm 0.5 \text{ cm}$ long and be equal in all respects to the pattern and viewing sample.
- 4.3.7 **POLICE Markings** – The front pouch front view and the back pouch front view must have permanent POLICE markings applied using heat-transfer method. The heat transfer material used must be as specified in para. 4.1.10. The font must be Arial as indicated in the drawings. The letter colour must be opaque white with no grin through of the shell material. The marking must be able to withstand normal washing and drying at least 50 times without degradation of the colour or permanency. There must be no loose or un-bonded edges or corners.

- 4.3.7.1 **POLICE Markings – Sizes** – The Police markings must be available in three sizes. Size I must be used on the front pouch on chest sizes 32 through 38. Size II must be used on the back pouch on chest sizes 32 through 38 and the front pouch on chest sizes 40 and up. Size III must be used on the back pouch on chest sizes 40 and up. The dimensions for each size are listed below.

Size I: 4.8 cm x 16.1 cm

Size II: 5.5 cm x 18 cm

Size III: 7.5 cm x 23.5 cm

- 4.3.8 **Marking & Cleaning Instructions Label** – Both the front pouch and the back pouch must have a durable label positioned and sewn to the slide fastener seam inside each pouch as shown in drawing 2 and 6. The text must be permanent inks of a contrasting colour and must withstand at least 50 washes with no apparent change in appearance. All text except for the RCMP stock number and size must be in size 6 font. The RCMP stock number and size must appear in size 8 font. The manufacturer's identification must not appear anywhere on the garment except where indicated on the label. The label must contain the following information in English and French.

1. Item name in English as written in Para. 1.1
2. Item name in French as written in Para. 1.1
3. RCMP stock number - reference contract documents. (Ex. 8075 000)
4. Size (Ex. 42537)
5. Date of manufacture, in numeric format year/month (Ex. 2018/11)
6. Your manufacturer identification (Company name or number)
7. Print information as shown below

1		
2		
3		
4		
5		
6		
7	Machine wash - cool (30°C) Wash separately Use minimal soap Double Rinse to remove all soap residue	Laver à la machine – à l'eau froide (30°C) Laver séparément Utiliser le moins de savon possible Rincer deux fois pour éliminer tout résidu de savon
	Do Not use fabric softener or chlorine bleach	Ne pas utiliser d'agent adoucissant ou d'agent de blanchiment
	Tumble dry- low (Do Not use dryer sheets)	Séchage par culbutage – à basse température (Ne pas utiliser d'assouplissant en feuilles)
	Steam iron - low	Repassage à vapeur - à basse température
	Warning: Remove SBA panels before laundering	Veuillez enlever les panneaux de protection avant le lavage.

4.3.9 **Packaging** – The carrier must be assembled at the waist.

5. **Quality Assurance Provisions**

5.1 **Responsibility for Inspection** – Unless otherwise stipulated in the contract, it is the prime contractor's responsibility to satisfy the RCMP, Uniform & Equipment Program that the material and services being supplied conform to this specification. This may be accomplished by performing the tests specified in this specification or by demonstrating to the satisfaction of the RCMP, Uniform & Equipment Program that conformity to this specification of manufacturing processes is assured. The contractor must use a commercial testing establishment acceptable to the RCMP, Uniform & Equipment Program.

5.2 The RCMP, Uniform & Equipment Program reserves the right to perform any inspection considered necessary to ensure the material and services conform to the specified requirements. For the purpose of inspection, a portion of each delivery not exceeding two percent or two out of any number delivered under 100 may be put to tests that could destroy the articles. If found to be inferior or not in accordance with this specification, all articles so destroyed must be replaced by others of proper quality and pattern at the expense of the contractor. The entire delivery may also be rejected if it is found that articles previously rejected due to non-repairable defects are redelivered for inspection.

- 5.3 The contractor will be promptly notified when any articles are not accepted and such articles will be replaced/repared at the contractor's risk and expense.

6. **Methods of Measuring**

Refer to drawing 11 for the corresponding scale of measurement location. The stock size 8075 scale of measurements are provided below and the non-stock size scale of measurements are provided in a separate document *360 Soft Body Armour, Carrier, External, Flat Panels – 8077 Non-Stock Sizes*. The measurements are taken on the body side of each panel.

Front Pouch

- 6.1 **Center Front Length** – The length must be measured from the base of the neckline to the hem. (A).
- 6.2 **Front Upper Chest Width** – The width must be measured across the front at the level of the lower chest pocket. (B).
- 6.3 **Front Chest Width** – The width must be measured across the front at the widest point of the top edge of the side wing from edge to edge. (C).
- 6.4 **Front Waist Width** – The width must be measured across the widest point at the bottom of the pouch from edge to edge. (D).
- 6.5 **Front Side Wing Height** – The height must be measured at the side from top to bottom, 2.5 cm from the side edge. (E).

Back Pouch

- 6.6 **Center Back Length** – The length must be measured from the base of the neckline to the hem. (F).
- 6.7 **Back Upper Width** – The width must be measured across the back, 8.5 cm below the back neckline. (G).
- 6.8 **Back Chest Width** – The width must be measured across the back at the widest point of the top edge of the side wing from edge to edge. (H).
- 6.9 **Back Waist Width** – The width must be measured across the widest point at the bottom of the pouch from edge to edge. (J).
- 6.10 **Back Side Wing Height** – The height must be measured at the side from top to bottom, 2.5 cm from the side edge. (K).

SIZE DESIGNATION	SCALE OF MEASUREMENTS – 8075 Soft Body Armour, Carrier, External, Flat Panels – STOCK SIZES										
	GARMENT MEASUREMENTS										
	Number of MOLLE Rows on Front Flap	Centre Front Length	Front Upper Chest Width	Front Chest Width	Front Waist Width	Front Side Wing Height	Centre Back Length	Back Upper Width	Back Chest Width	Back Waist Width	Back Side Wing Height
34329	3	32.0	27.0	55.0	49.0	18.0	36.0	27.5	55.0	49.0	18.0
36231	3	32.0	27.5	57.5	51.5	19.0	36.5	28.2	57.5	51.5	19.0
36331	3	34.0	27.5	57.5	51.5	20.0	38.5	28.2	57.5	51.5	20.0
36431	3	36.0	27.5	57.5	51.5	21.0	40.5	28.2	57.5	51.5	21.0
36433	3	36.0	27.5	57.5	54.0	21.0	40.5	28.2	57.5	54.0	21.0
36531	3	38.0	27.5	57.5	51.5	22.0	42.5	28.2	57.5	51.5	22.0
36533	3	38.0	27.5	57.5	54.0	22.0	42.5	28.2	57.5	54.0	22.0
36631	3	40.0	27.5	57.5	51.5	23.0	44.5	28.2	57.5	51.5	23.0
36633	3	40.0	27.5	57.5	54.0	23.0	44.5	28.2	57.5	54.0	23.0
38233	3	32.0	28.2	60.0	54.0	19.0	36.7	29.0	60.0	54.0	19.0
38333	3	34.0	28.2	60.0	54.0	20.0	38.7	29.0	60.0	54.0	20.0
38433	3	36.0	28.2	60.0	54.0	21.0	40.7	29.0	60.0	54.0	21.0
38435	3	36.0	28.2	60.0	56.5	21.0	40.7	29.0	60.0	56.5	21.0
38533	3	38.0	28.2	60.0	54.0	22.0	42.7	29.0	60.0	54.0	22.0
38535	3	38.0	28.2	60.0	56.5	22.0	42.7	29.0	60.0	56.5	22.0
38633	3	40.0	28.2	60.0	54.0	23.0	44.7	29.0	60.0	54.0	23.0
38635	3	40.0	28.2	60.0	56.5	23.0	44.7	29.0	60.0	56.5	23.0
40135	3	32.0	29.0	62.5	56.5	19.0	37.0	30.0	62.5	56.5	19.0
40235	3	34.0	29.0	62.5	56.5	20.0	39.0	30.0	62.5	56.5	20.0
40335	3	36.0	29.0	62.5	56.5	21.0	41.0	30.0	62.5	56.5	21.0
40337	3	36.0	29.0	62.5	59.0	21.0	41.0	30.0	62.5	59.0	21.0
40435	3	38.0	29.0	62.5	55.5	22.0	43.0	30.0	62.5	55.5	22.0
40437	3	38.0	29.0	62.5	59.0	22.0	43.0	30.0	62.5	59.0	22.0
40535	4	40.0	29.0	62.5	55.5	23.0	45.0	30.0	62.5	55.5	23.0
40537	4	40.0	29.0	62.5	59.0	23.0	45.0	30.0	62.5	59.0	23.0
Tolerances + ONLY		1 cm	0.5 cm	1 cm	1 cm	0.5 cm	1 cm	0.5 cm	1 cm	1 cm	0.5 cm
Measurement Location		A	B	C	D	E	F	G	H	J	K

NOTE: All measurements are in centimeters unless otherwise indicated.

SIZE DESIGNATION	SCALE OF MEASUREMENTS – 8075 Soft Body Armour, Carrier, External, Flat Panels – STOCK SIZES										
	GARMENT MEASUREMENTS										
	Number of MOLLE Rows on Front Flap	Centre Front Length	Front Upper Chest Width	Front Chest Width	Front Waist Width	Front Side Wing Height	Centre Back Length	Back Upper Width	Back Chest Width	Back Waist Width	Back Side Wing Height
42337	3	36.0	29.5	65.0	59.0	21.0	41.0	30.5	65.0	59.0	21.0
42339	3	36.0	29.5	65.0	61.5	21.0	41.0	30.5	65.0	61.5	21.0
42437	3	38.0	29.5	65.0	59.0	22.0	43.0	30.5	65.0	59.0	22.0
42439	3	38.0	29.5	65.0	61.5	22.0	43.0	30.5	65.0	61.5	22.0
42537	4	40.0	29.5	65.0	59.0	23.0	45.0	30.5	65.0	59.0	23.0
42539	4	40.0	29.5	65.0	61.5	23.0	45.0	30.5	65.0	61.5	23.0
44439	3	38.0	30.5	67.5	61.5	22.0	43.5	31.5	67.5	61.5	22.0
44441	3	38.0	30.5	67.5	64.0	22.0	43.5	31.5	67.5	64.0	22.0
44539	4	40.0	30.5	67.5	61.5	23.0	45.5	31.5	67.5	61.5	23.0
44541	4	40.0	30.5	67.5	64.0	23.0	45.5	31.5	67.5	64.0	23.0
44639	4	42.0	30.5	67.5	61.5	24.0	47.5	31.5	67.5	61.5	24.0
44641	4	42.0	30.5	67.5	64.0	24.0	47.5	31.5	67.5	64.0	24.0
46443	3	38.0	31.5	70.0	66.5	22.0	43.8	32.5	70.0	66.5	22.0
46543	4	40.0	31.5	70.0	66.5	23.0	45.8	32.5	70.0	66.5	23.0
46643	4	42.0	31.5	70.0	66.5	24.0	47.8	32.5	70.0	66.5	24.0
48445	4	40.0	32.5	72.5	69.0	23.5	46.0	33.5	72.5	69.0	23.5
48545	4	42.0	32.5	72.5	69.0	24.5	48.0	33.5	72.5	69.0	24.5
48645	4	44.0	32.5	72.5	69.0	25.5	50.0	33.5	72.5	69.0	25.5
50447	4	40.0	33.5	75.0	71.5	23.5	46.3	34.5	75.0	71.5	23.5
50547	4	42.0	33.5	75.0	71.5	24.5	48.3	34.5	75.0	71.5	24.5
50647	4	44.0	33.5	75.0	71.5	25.5	50.3	34.5	75.0	71.5	25.5
Tolerances + ONLY		1 cm	0.5 cm	1 cm	1 cm	0.5 cm	1 cm	0.5 cm	1 cm	1 cm	0.5 cm
Measurement Location		A	B	C	D	E	F	G	H	J	K

NOTE: All measurements are in centimeters unless otherwise indicated.

SCALE OF MEASUREMENTS – 8075 Soft Body Armour, Carrier, External, Flat Panels – STOCK SIZES										
SIZE DESIGNATION	COMPONENT MEASUREMENTS									
	Elastic Width		Slide Fastener – Lengths		Hook & Loop – Shoulder		Attachment Strap		Total Length	
	Back	Cummerbund	Internal Access Slide Fastener	Top Chest Pocket	Lower Chest Pocket	Front Hook Tape Length	Back Loop Tape Length	Loop Tape Length		
34329	12.7	10.2	14½"	8"	7½"	13.5	15.0	12.5	20.5	
36231	12.7	10.2	14½"	8"	7½"	14.0	15.5	12.5	20.5	
36331	12.7	10.2	14½"	8"	7½"	14.0	15.5	15.2	23.2	
36431	12.7	10.2	14½"	8"	7½"	14.0	15.5	15.2	23.2	
36433	12.7	10.2	14½"	8"	7½"	14.0	15.5	15.2	23.2	
36531	12.7	10.2	14½"	8"	7½"	14.0	15.5	15.2	23.2	
36533	12.7	10.2	14½"	8"	7½"	14.0	15.5	15.2	23.2	
36631	12.7	10.2	14½"	8"	7½"	14.0	15.5	15.2	23.2	
36633	12.7	10.2	14½"	8"	7½"	14.0	15.5	15.2	23.2	
38233	12.7	10.2	14½"	8"	7½"	14.5	16.0	12.5	20.5	
38333	12.7	10.2	14½"	8"	7½"	15.0	16.5	15.2	23.2	
38433	12.7	10.2	14½"	8"	7½"	15.0	16.5	15.2	23.2	
38435	12.7	10.2	14½"	8"	7½"	15.0	16.5	15.2	23.2	
38533	15.2	10.2	14½"	8"	7½"	15.0	16.5	15.2	23.2	
38535	15.2	10.2	14½"	8"	7½"	15.0	16.5	15.2	23.2	
38633	15.2	10.2	14½"	8"	7½"	15.0	16.5	15.2	23.2	
38635	15.2	10.2	14½"	8"	7½"	15.0	16.5	15.2	23.2	
40135	12.7	10.2	14½"	9"	8"	15.0	16.5	12.5	20.5	
40235	12.7	10.2	14½"	9"	8"	15.0	16.5	15.2	23.2	
40335	15.2	10.2	14½"	9"	8"	15.0	16.5	15.2	23.2	
40337	15.2	10.2	16½"	9"	8"	15.0	16.5	15.2	23.2	
40435	15.2	10.2	14½"	9"	8"	15.0	16.5	15.2	23.2	
40437	15.2	10.2	16½"	9"	8"	15.0	16.5	15.2	23.2	
40535	15.2	10.2	14½"	9"	8"	15.0	16.5	15.2	23.2	
40537	15.2	10.2	16½"	9"	8"	15.0	16.5	15.2	23.2	
TOLERANCES ±	0.5 cm		½"			0.5 cm	0.5 cm	0.5 cm	0.5 cm	

NOTE: All measurements are in centimeters unless otherwise indicated.

SCALE OF MEASUREMENTS – 8075 Soft Body Armour, Carrier, External, Flat Panels – STOCK SIZES										
SIZE DESIGNATION	COMPONENT MEASUREMENTS									
	Elastic Width		Slide Fastener – Lengths			Hook & Loop – Shoulder		Attachment Strap		Total Length
	Back	Cummerbund	Internal Access Slide Fastener	Top Chest Pocket	Lower Chest Pocket	Front Hook Tape Length	Back Loop Tape Length	Loop Tape Length		
42337	15.2	10.2	16½"	9"	8"	15.0	16.5	15.2	23.2	
42339	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
42437	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
42439	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
42537	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
42539	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
44439	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
44441	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
44539	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
44541	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
44639	15.2	12.7	16½"	9"	8"	15.5	17.0	16.5	24.5	
44641	15.2	12.7	16½"	9"	8"	15.5	17.0	16.5	24.5	
46443	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
46543	15.2	10.2	16½"	9"	8"	15.5	17.0	15.2	23.2	
46643	15.2	12.7	16½"	9"	8"	15.5	17.0	16.5	24.5	
48445	15.2	10.2	19½"	9"	8"	16.0	17.5	15.2	23.2	
48545	15.2	12.7	19½"	9"	8"	16.0	17.5	15.2	23.2	
48645	17.8	12.7	19½"	9"	8"	16.0	17.5	16.5	24.5	
50447	15.2	10.2	19½"	9"	8"	16.5	19.0	15.2	23.2	
50547	15.2	12.7	19½"	9"	8"	16.5	19.0	15.2	23.2	
50647	17.8	12.7	19½"	9"	8"	16.5	19.0	16.5	24.5	
TOLERANCES ±	0.5 cm		½"			0.5 cm	0.5 cm	0.5 cm	0.5 cm	

NOTE: All measurements are in centimeters unless otherwise indicated.

TABLE I
Shell Material Testing Requirements

REQUIREMENT				TEST METHODS
1	Colour	Dark Navy, to match swatch available from RCMP Uniform & Equipment Program		
2	Fibre Content	100% Nylon		<ul style="list-style-type: none">CAN/CGSB-4.2 No. 14-2005
3	Weave	Ripstop		<ul style="list-style-type: none">Visual
4	Mass	235-270 g/m ² ± 14g/m ²		<ul style="list-style-type: none">CAN/CGSB-4.2 No. 5.1-M90 (R2013) ORASTM D3776/D3776M-09a (R2013)
5	Yarns per cm	Warp:	18 min.	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 6-2013 ORISO 7211-2:1984
		Weft:	14.5 min.	
6	Breaking Strength - Grab Method Constant-rate-of-extension (CRE) machine	Warp:	1480 N min	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 9.2-M90 (R2013) ORASTM D5034-09 (R2013)
		Weft:	1320 N min	
7	Tearing Strength - Rip Method Constant-rate-of-extension (CRE) machine	Warp:	175 N min	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 12.1-2016
		Weft:	175 N min	
8	Abrasion Resistance - Martindale Tester	No breakdown after 70,000 rubs		<ul style="list-style-type: none">ASTM D4966-12 (R2016) Option 1
9	Dimensional Change in Domestic Laundering (cool wash 40°C)	Warp:	2% max	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 58-2004 Wash procedure I, Dry procedure E
		Weft:	2% max	
10	Resistance to Surface Wetting - Spray Method	Initial	100	<ul style="list-style-type: none">ISO 4920:2012 ORAATCC Test Method 22-2017 <u>Washing:</u> <ul style="list-style-type: none">ISO 6330:2012Wash Procedure 5B, Dry Procedure F
		After 5 washes	70 or better	
11	Colourfastness - To Light – Xenon Arc Method	Blue wool Standard L6 or better		<ul style="list-style-type: none">ISO 105-B02:2014, Method 3
12	Colourfastness - To Crocking	Dry:	Gray Scale 4 or better	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 22-2004 (R2013) ORISO 105-X12:2016
		Wet:	Gray Scale 4 or better	
13	Colourfastness - To Perspiration	Acid:	Gray Scale 4 or better	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 23-M90 (R2013) ORISO 105-E04:2013
		Alkaline:	Gray Scale 4 or better	
14	Colourfastness - To Laundering (cool wash 40°C)	Gray Scale 4 or better		<ul style="list-style-type: none">CAN/CGSB-4.2 No. 19.1-2004 (R2013) Test 1 ORISO 105-C10:2006 (R2015)

TABLE II
Lining Material (Spacer Mesh)

REQUIREMENT			TEST METHODS
1	Colour	Black	
2	Fibre Content	100% Polyester	
3	Knit	Double Needle Bar Mesh	
4	Mass	556 g/m ² ± 54 g/m ² 16.4 oz/yd ² ± 1.6 oz/yd ²	
5	Yarns per inch	Wales:	11 ± 2
		Courses:	22 ± 2
6	Dimensional Change in Domestic Laundering (cool wash 30°C)	Warp:	3% max
		Weft:	3% max
7	Thickness	6.6 mm ± 0.66 mm 0.261" ± 0.026"	
8	Colourfastness - To Crocking	Dry:	Gray Scale 3.5 or better
		Wet:	Gray Scale 3.5 or better
9	Colourfastness - To Perspiration	Acid:	Gray Scale 4 or better
		Alkaline:	Gray Scale 4 or better
10	Colourfastness - To Laundering	Gray Scale 3.5 or better	

APPENDIX A

Scaled Pattern Identifier

Pattern #: G.S. 1045-360 Soft Body Armour, Carrier, External, Flat Panels
Title: Stock #8075/8077

Patterns - Patterns are available from the RCMP, Uniform and Equipment Program. Firms requested to produce Pre-Award Samples will be provided with the requested size pattern only. The full set of patterns in individual sizes will be provided to the successful bidder after the contract is awarded. The bidder will receive the files electronically in a .DXF format.

The patterns include seam allowances, drill holes and/or placement templates. All pieces must be cut in the direction indicated on the grain line of the pattern pieces. Manufacturers are required to make changes to the pattern, if necessary, in order to meet the scale of measurements and/or to suit the production process, however, the design and grade must not be affected or changed.

The pattern for stock numbers 8075 and 8077 are the same. Stock number 8075 identifies sizes required for inventory and stock number 8077 identifies the non-stock sizes.

All patterns are the property of the RCMP and must be returned and/or deleted upon completion of the contract.

Pattern Pieces – The design has 27 pattern components.

Material and Cutting Legend

Shell Material	= Para. 4.1.1
Lining Material	= Para. 4.1.2
Neoprene	= Para. 4.1.9
Cut 1 Single	= Cut 1
Cut 1 Paired	= Cut 2
Cut 2 Paired	= Cut 4

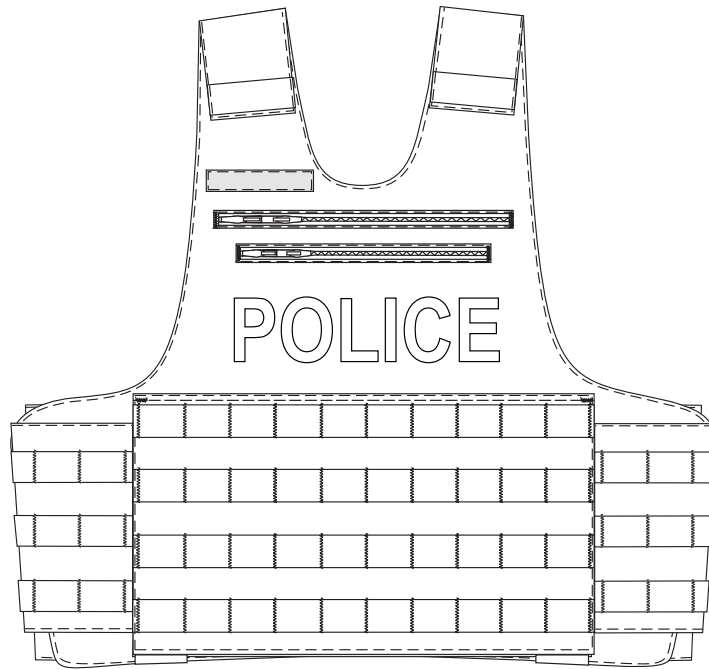
Pattern Components	Nomenclature	Quantity to be cut	Material
# 1 of 27	Back	1 Single	Shell Material
# 2 of 27	Lower Back	1 Single	Shell Material
# 3 of 27	Front	1 Single	Shell Material
# 4 of 27	Front Flap	1 Single	Shell Material
# 5 of 27	Upper Pocket Welt	1 Single	Shell Material
# 6 of 27	Lower Pocket Welt	1 Single	Shell Material
# 7 of 27	Pocket Upper Front	1 Single	Shell Material
# 8 of 27	Pocket Notebook	1 Single	Shell Material
# 9 of 27	Pocket Upper Front Facing	1 Single	Shell Material
# 10 of 27	Lower Pocket	1 Single	Shell Material
# 11 of 27	Pen/Pencil Loop	1 Single	Shell Material
# 12 of 27	Back Lower Facing	1 Single	Shell Material
# 13 of 27	Back Upper Facing	1 Single	Shell Material
# 14 of 27	Front Lower Facing	1 Single	Shell Material
# 15 of 27	Front Upper Facing	1 Single	Shell Material
# 16 of 27	Zip Ends	2 Paired	Shell Material
# 17 of 27	Back Upper Lining	1 Single	Lining Material
# 18 of 27	Front Upper Lining	1 Single	Lining Material
# 19 (a) of 27	Side Elastic Cumberbund	1 Paired	Elastic (10.2 cm – 4’')
# 19 (b) of 27	Side Elastic Cumberbund	1 Paired	Elastic (12.7 cm – 5’')
# 19 (c) of 27	Side Elastic Cumberbund	1 Paired	Elastic (15.2 cm – 6’')
# 19 (d) of 27	Side Elastic Cumberbund	1 Paired	Elastic (17.8 cm – 7’')
# 20 (a) of 27	Cumberbund Extension Grip (10.2 cm – 4’')	1 Single	Shell Material
# 20 (b) of 27	Cumberbund Extension Grip (12.7 cm – 5’')	1 Single	Shell Material
# 20 (c) of 27	Cumberbund Extension Grip (15.2 cm – 6’')	1 Single	Shell Material

Pattern Components	Nomenclature	Quantity to be cut	Material
# 20 (d) of 27	Cummerbund Extension Grip (17.8 cm – 7’’)	1 Single	Shell Material
# 21 of 27	Side Waist Strap with Loop Template	1 Paired	Shell Material
# 22 of 27	Side Waist Strap with Hook Template	1 Paired	Shell Material
# 23 of 27	Side Waist Strap Reinforcement	1 Paired	Shell Material
# 24 of 27	Front Flap Reinforcement	1 Single	Shell Material
# 25 (a) of 27	Centre Back Waist Strap	1 Paired	Elastic (12.7 cm – 5’’)
# 25 (b) of 27	Centre Back Waist Strap	1 Paired	Elastic (15.2 cm – 6’’)
# 25 (c) of 27	Centre Back Waist Strap	1 Paired	Elastic (17.8 cm – 7’’)
# 25 (d) of 27	Centre Back Waist Strap	1 Paired	Elastic (20.3 cm – 8’’)
# 26 of 27	Shoulder Padding	2 Paired	Neoprene
# 27 of 27	Shoulder Padding - Cover	2 Paired	Nylon Lining

Drawing 1

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels



Front View



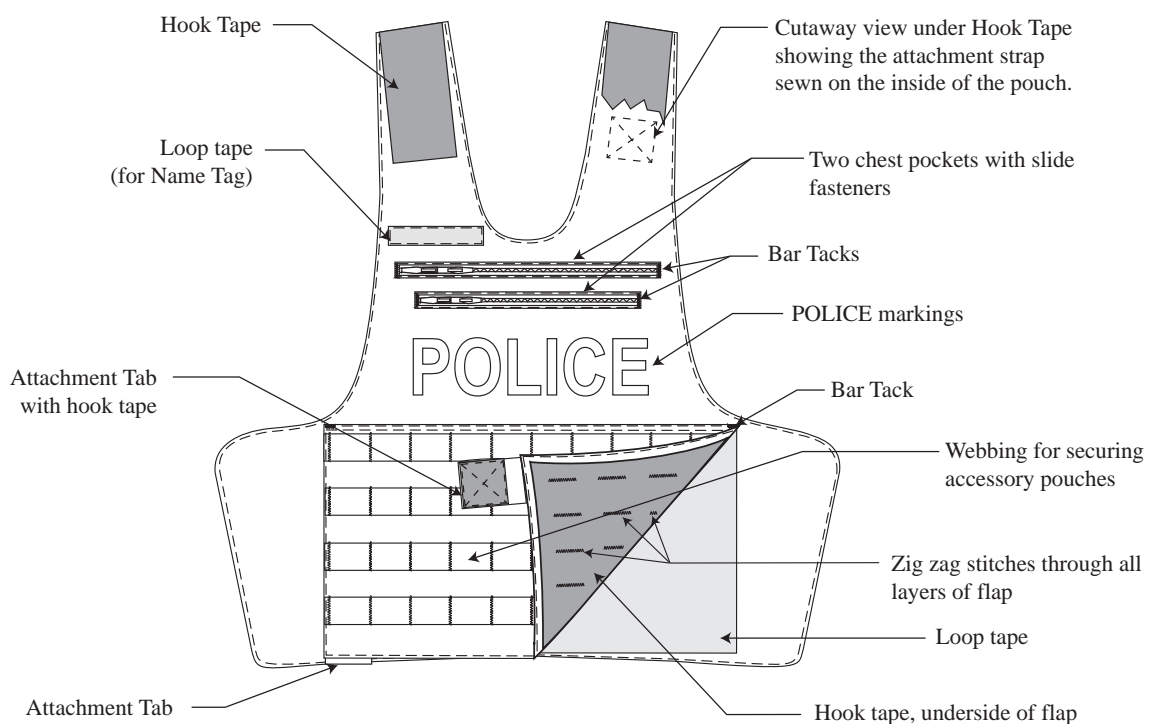
Back View

NOT TO SCALE

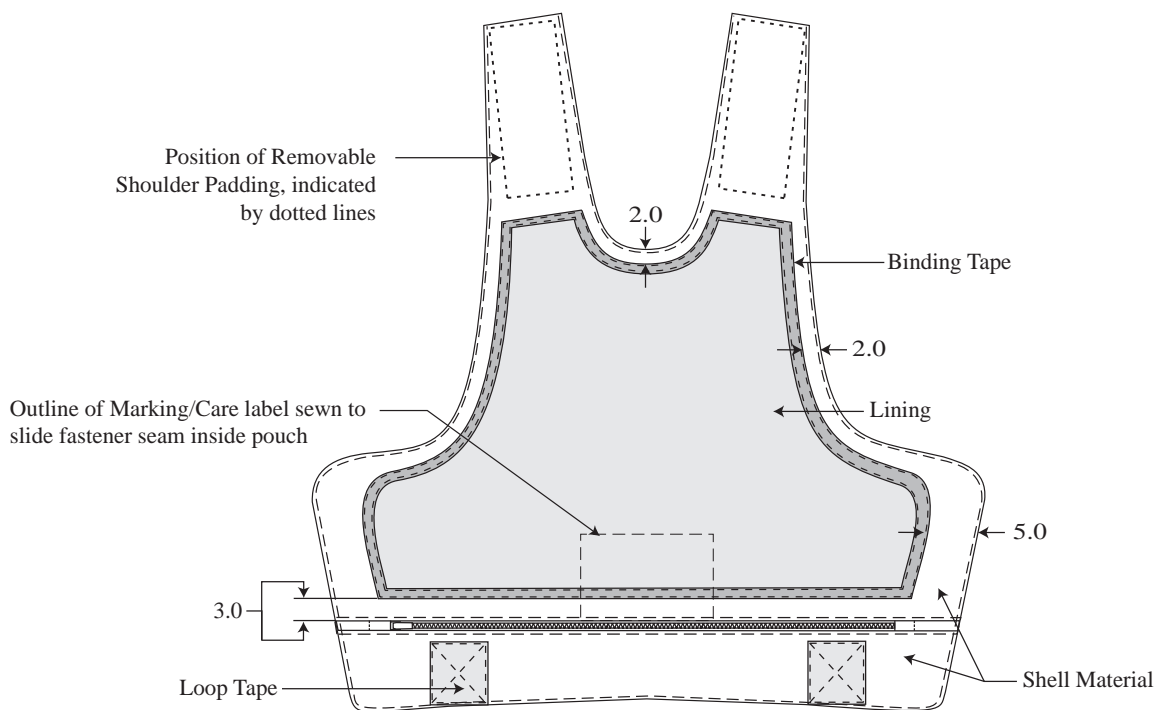
Drawing 2

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels Front Pouch



Front Pouch (Front View)



**Front Pouch (Back View)
(Body Side)**

NOT TO SCALE

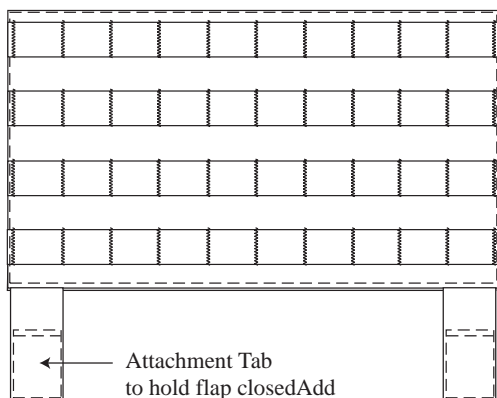
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

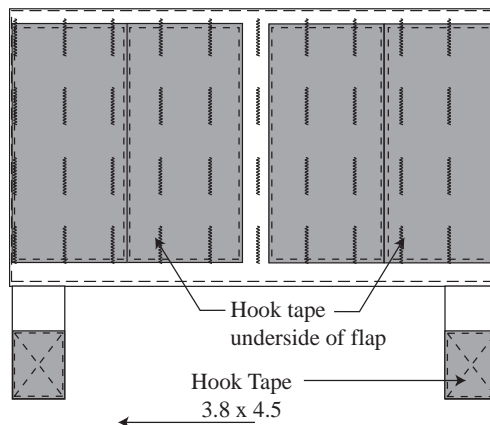
Drawing 3

G.S. 1045-360

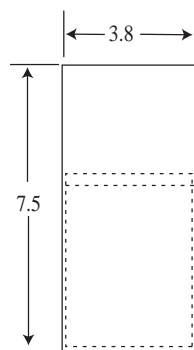
Soft Body Armour, Carrier, External, Flat Panels Flap and Attachment Tab



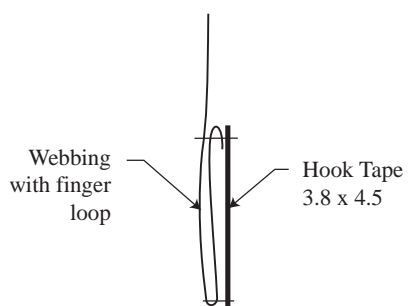
Front Flap (Front View)



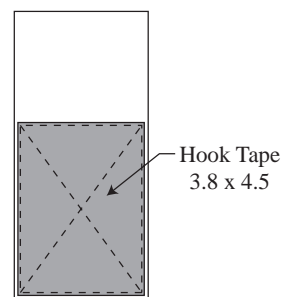
Front Flap (Back View)



Front View



Side View



Back View

Attachment Tab Detail

NOT TO SCALE

All measurements are shown in centimeters.

± 0.2 cm tolerance acceptable unless otherwise indicated.

Drawing 4

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels
Front Pouch



Front Pouch (shown without flap)

NOT TO SCALE

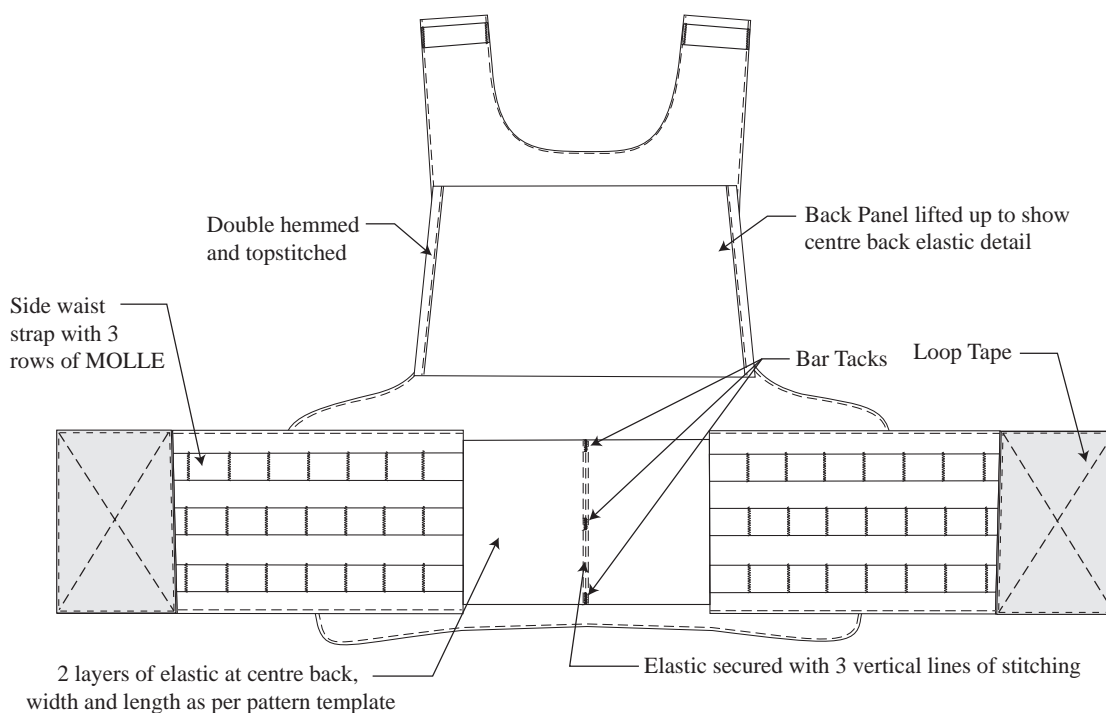
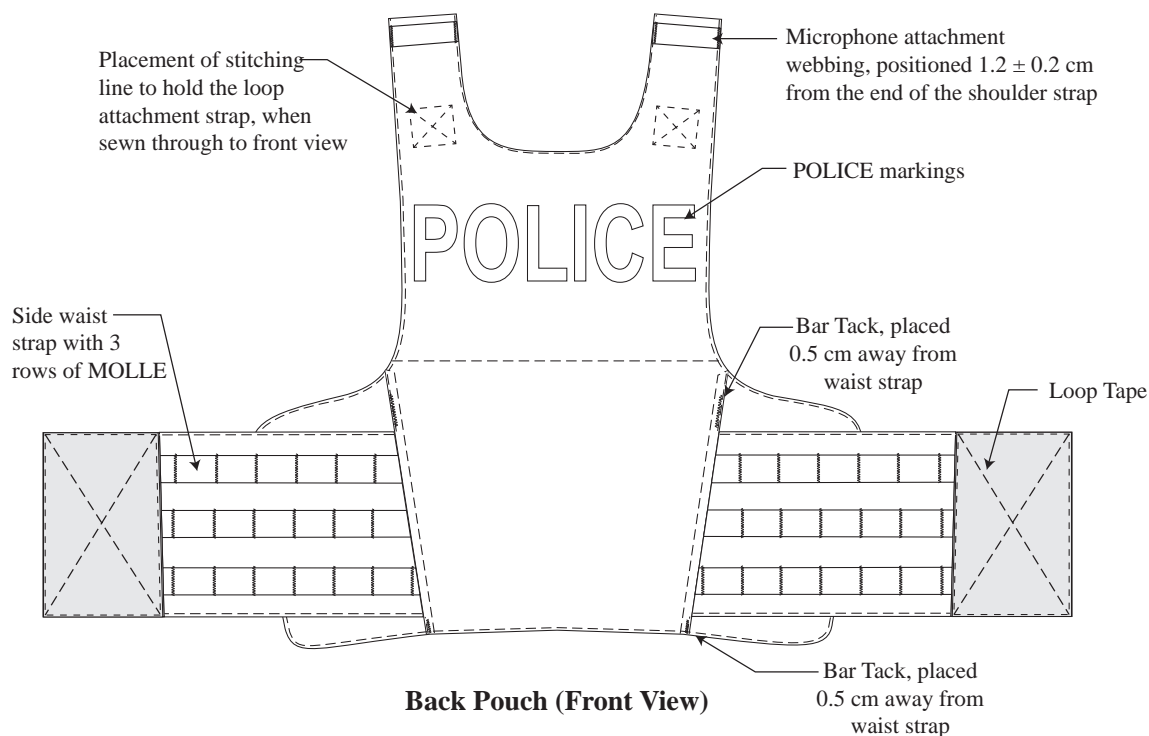
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

Drawing 5

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels Back Pouch, Front View



NOT TO SCALE

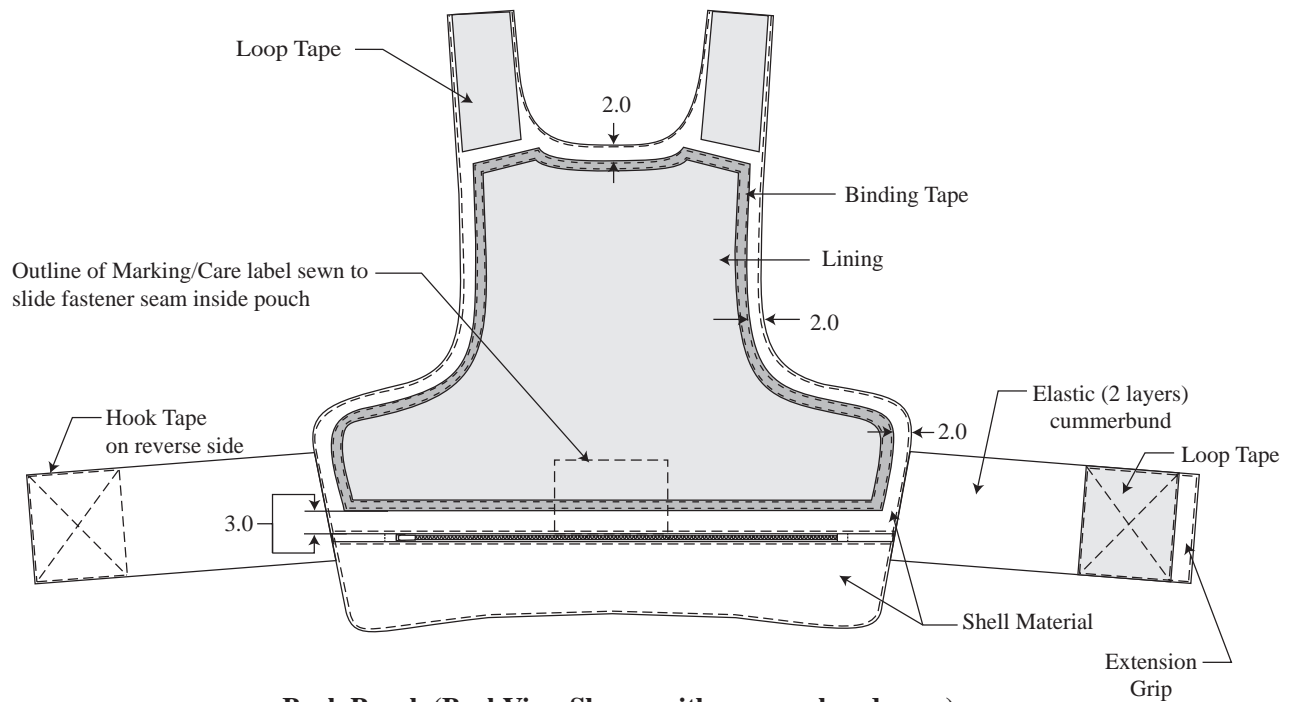
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

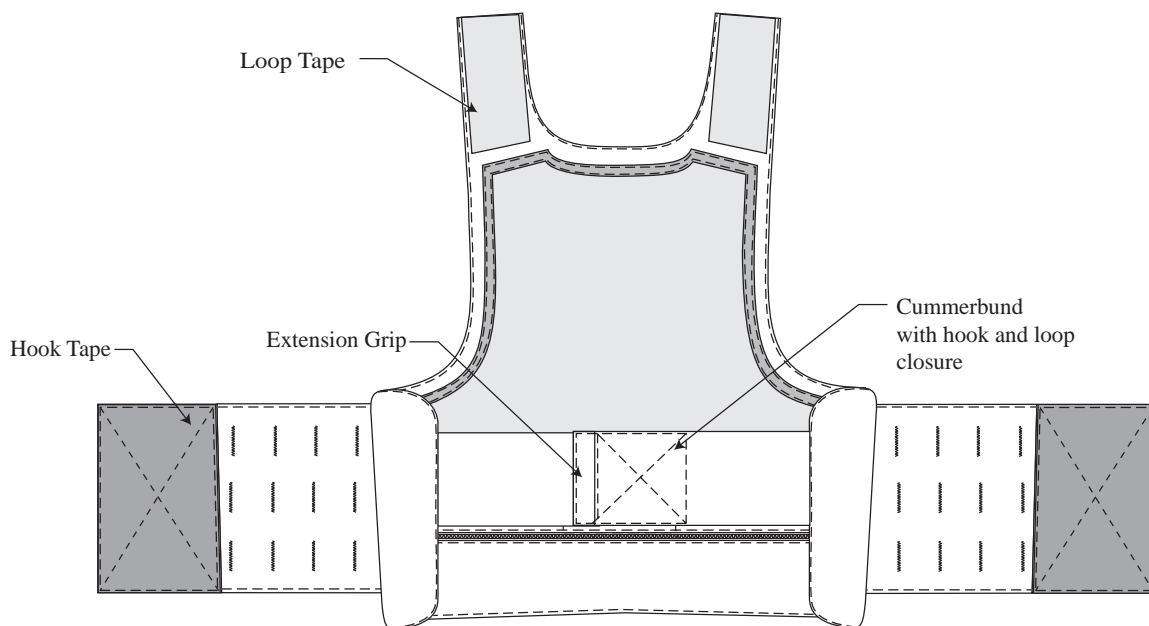
Drawing 6

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels Back Pouch, Back View



Back Pouch (BackView Shown with cummerbund open)
(Body Side)



Back Pouch (BackView with cummerbund attached)
(Body Side)

NOT TO SCALE

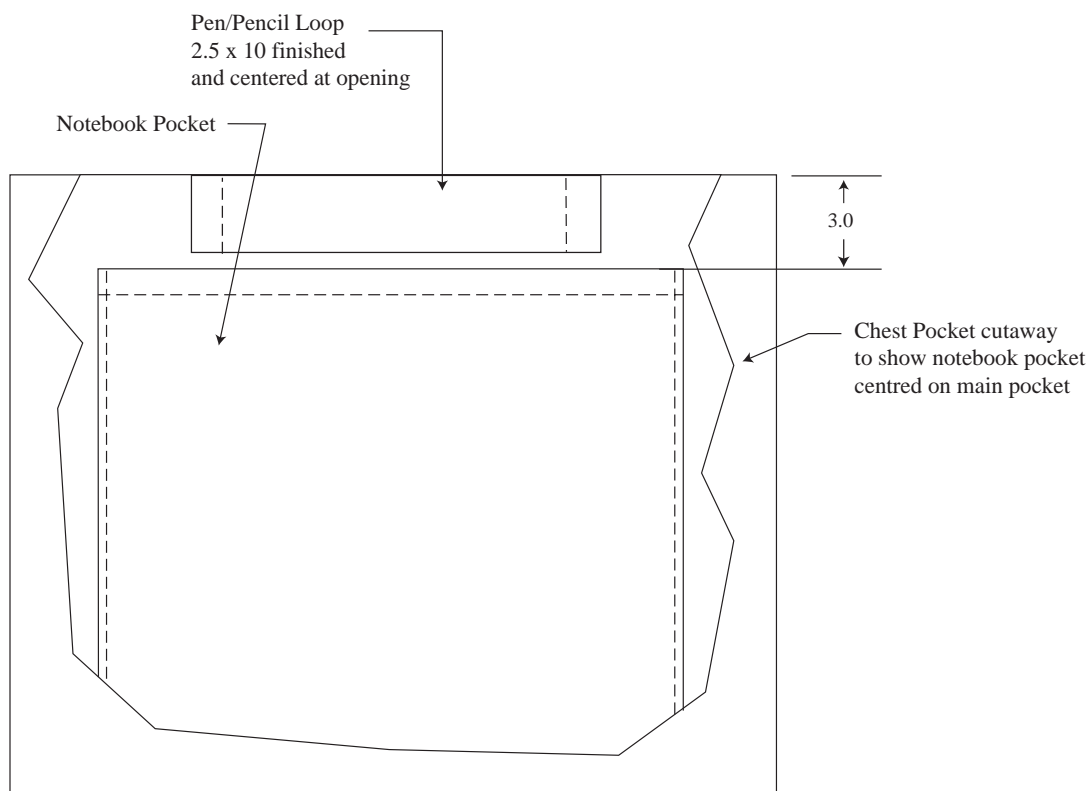
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

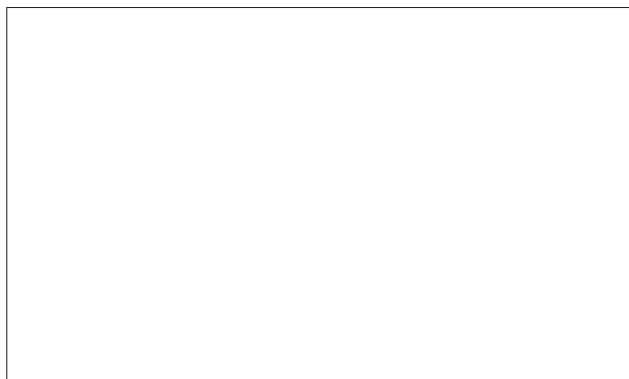
Drawing 7

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels
Chest Pockets Detail
(Welted Opening with Slide Fastener Closure not shown)



Upper Chest Pocket Bag and Inside Notebook Pocket



Lower Chest Pocket Bag

NOT TO SCALE

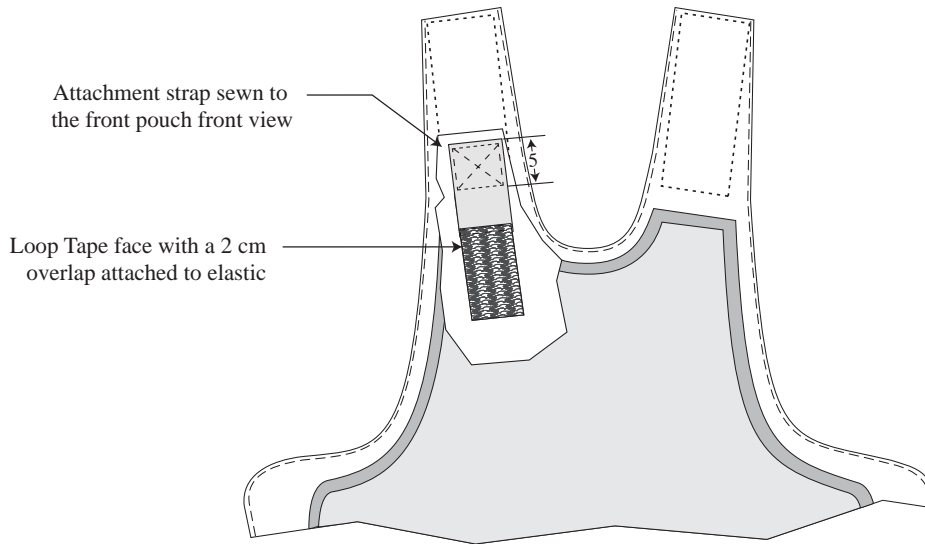
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

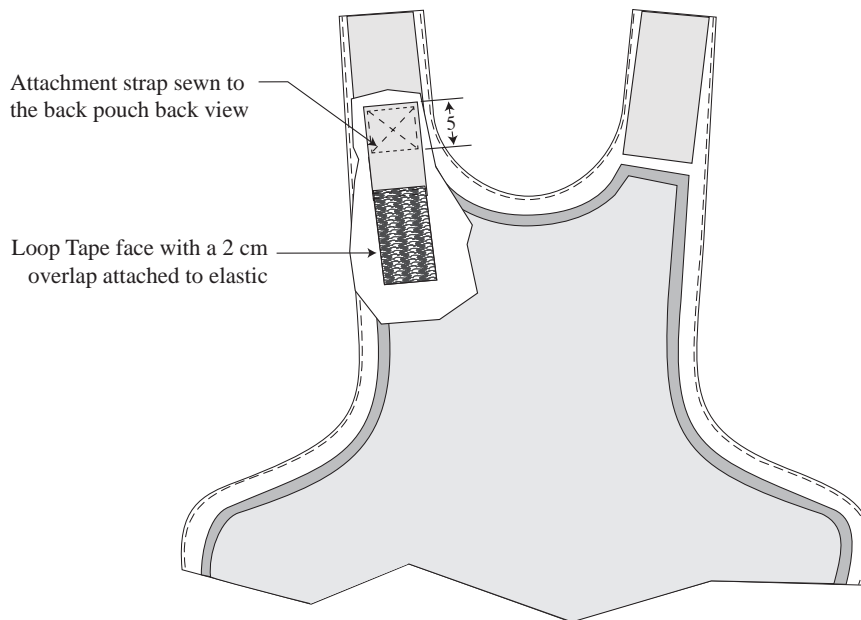
Drawing 8

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels
Cutaway View, Front & Back Pouches, showing
Attachment Strap



Front Pouch Detail
Back View (Body Side)



Back Pouch Detail
Back View (Body Side)

NOT TO SCALE

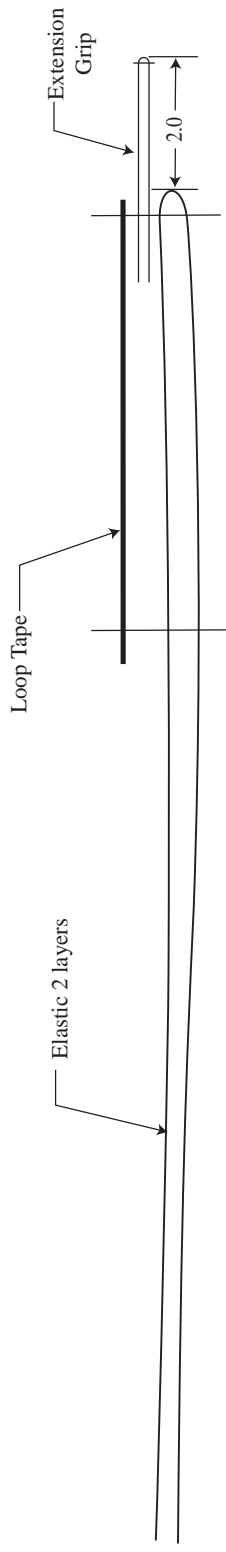
All measurements are shown in centimeters.

± 0.2 cm tolerance acceptable unless otherwise indicated.

Drawing 9

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels
Left Cummerbund Detail



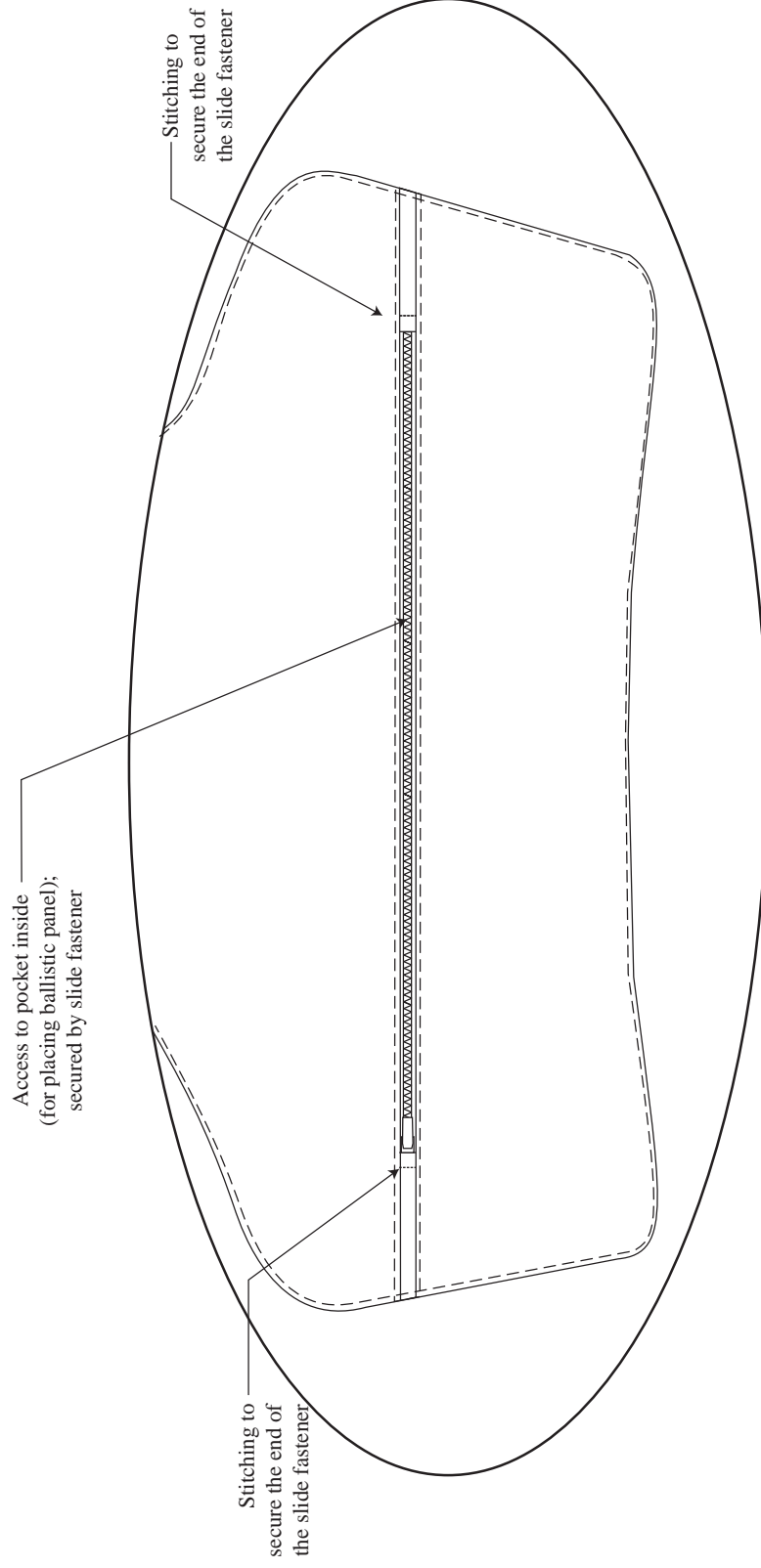
Left Cummerbund Side View

NOT TO SCALE
All measurements are shown in centimeters.
± 0.5 cm tolerance acceptable unless otherwise indicated.

Drawing 10

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels
Slide Fastener Opening Body Side



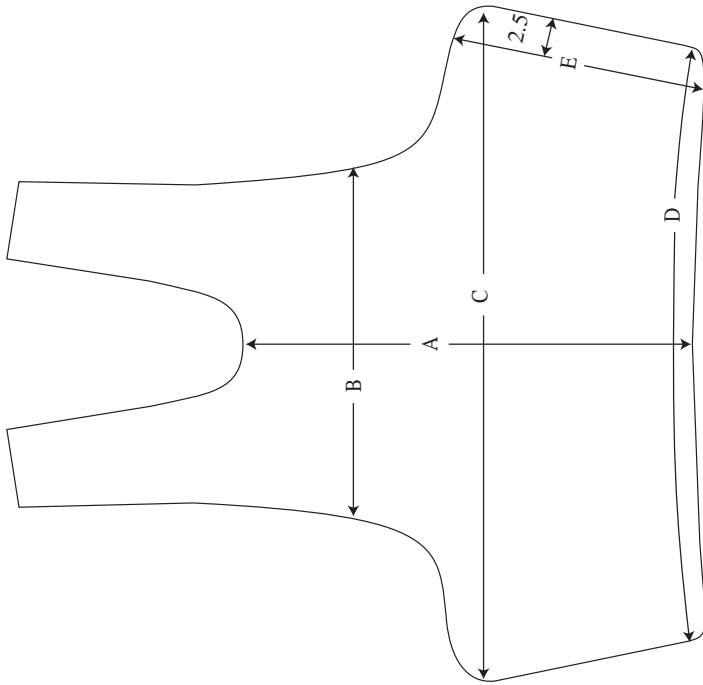
Inner View
(Body Side)

NOT TO SCALE
All measurements are shown in centimeters.
± 0.5 cm tolerance acceptable unless otherwise indicated.

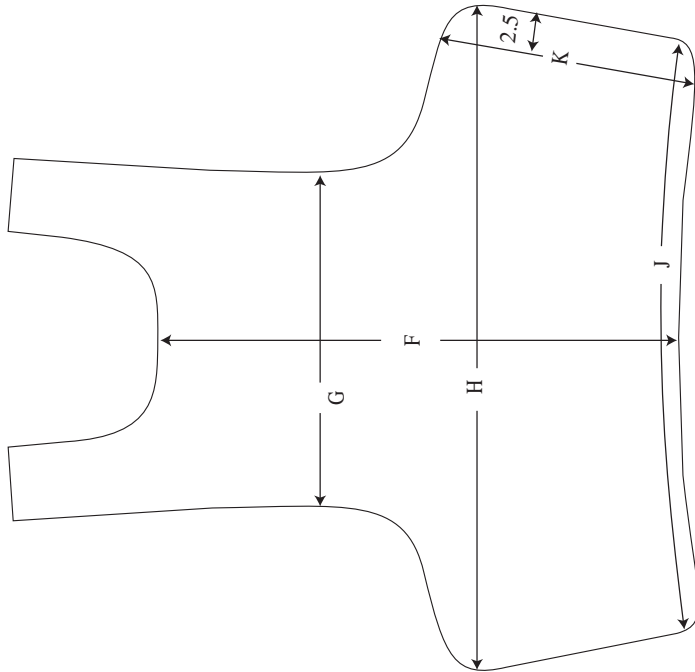
Drawing 11

G.S. 1045-360

Soft Body Armour, Carrier, External, Flat Panels
Measurement Location



Front Pouch, body side



Back Pouch, body side
(show without waist straps)

NOT TO SCALE
All measurements are shown in centimeters.
± 0.5 cm tolerance acceptable unless otherwise indicated.



Royal Canadian Mounted Police
Gendarmerie royale du Canada

Doc. no: G.S. 1045-368
Date: 2019-04-15

Specification

Soft Body Armour, Carrier, External, Female Panels

This document has 33 pages including the drawings.

This document was created in English.

The document is available in English and French.

☒ English/Anglais
Français/French

The photograph on this page is for reference only.



Modifications

[illegible]

RCMP VIEWING SAMPLE

A viewing sample, when available, will be supplied to the successful bidder.

This will be used for the guidance of the manufacturer in all factors not covered by this specification or referred to therein. Variation from the specification may appear in the sample in which case the specification must govern.

It may be obtained from:

Royal Canadian Mounted Police
ATTN: Uniform & Equipment Program
(440 Coventry Road, Warehouse Building)
73 Leikin Drive
Ottawa, Ontario
K1A 0R2

It will be sent “prepaid” and is to be returned “prepaid”.

The viewing sample must be returned to the RCMP in the same condition as received by the manufacturer. Lost or damaged viewing samples must be replaced by an identical item or the RCMP must be reimbursed for the cost of an acceptable replacement.

SPECIFICATION**Soft Body Armour, Carrier, External, Female Panels****1. Definition**

- 1.1 This specification must govern the manufacture and inspection of the Soft Body Armour, Carrier, External, Female Panels. The specific item covered under this specification with stock number is as follows:
 - i. 8078-100 – Soft Body Armour, Carrier, External, Female Panels / Gilet pare-balles extérieur pour panneaux balistiques souples pour femmes
- 1.2 This specification, patterns, viewing sample or other information issued in connection therewith, may only be used for specific enquiries, solicitations, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for Soft Body Armour, Carrier, External, Female Panels.
- 1.4 This specification has been translated into French from this original English language document.

2. Applicable Specifications

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the solicitation, unless otherwise specified.
- 2.2 **Canadian General Standards Board (CAN/CGSB);**
 - 4.2 No. 5.1-M90 (R2013) Textile test methods – Unit mass of fabrics
 - 4.2 No. 6-2013 Textile test methods – Woven Fabrics, Determination of number of threads per unit length
 - 4.2 No. 9.2-M90 (R2013) Textile test methods – Breaking strength of fabrics, grab method
 - 4.2 No. 12.1-2016 Textile test methods – Tearing strength - Single-rip method
 - 4.2 No. 14-2005 Textile test methods – Quantitative Analysis of Fibre Mixtures
 - 4.2 No. 19.1-2004 (R2013) Textile test methods – Colourfastness to washing, Accelerated test

- | | |
|-------------------------|--|
| 4.2 No. 22-2004 (R2013) | Textile test methods – Colourfastness to rubbing (Crocking) |
| 4.2 No. 23-M90 (R2013) | Textile test methods – Colourfastness to perspiration |
| 4.2 No. 58-2004 | Textile test methods – Dimensional change in domestic laundering of textiles |
| 86.1-2003 | Care Labelling of Textiles |
- 2.3 **General Services Administration – US Government**
- Commercial Item Description**
- | | |
|------------|--|
| A-A-50199A | Thread, Polyester Core, Cotton or Polyester-Covered. |
| A-A-59826A | Thread, Nylon |
- 2.4 **Royal Canadian Mounted Police Specification (RCMP)**
- | | |
|---------------|---------------------------------|
| G.S. 1045-367 | Soft Body Armour, Female Panels |
|---------------|---------------------------------|
- 2.5 **American Society for Testing and Materials (ASTM)**
- | | |
|--------------------------|---|
| D1777-96 (2015) | Standard Test Method for Thickness of Textile Materials |
| D3776/D3776M-09a (R2013) | Standard Test Method for Mass per Unit Area (Weight) of Fabric |
| D4966-12 (R2016) | Standard Test Method for Abrasion Resistance of Textile Fabrics (Martindale Abrasion Tester Method) |
| D5034-09 (R2013) | Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test) |
| D5169-98 (2015) | Standard Test Method for Shear Strength (Dynamic Method) of Hook and Loop Touch Fasteners |
| D5170-98 (2015) | Standard Test Method for Peel Strength (“T” Method) of Hook and Loop Touch Fasteners |
| D8007-15 ^{e1} | Standard Test Method for Wale and Course Count of Weft Knitted Fabrics |
- 2.6 **American Association of Textile Chemists and Colorists (AATCC)**
- | | |
|---------------------|---|
| Test Method 8-2016 | Colourfastness to Crocking: Crockmeter method |
| Test Method 15-2013 | Colourfastness to Perspiration |
| Test Method 22-2017 | Water Repellency: Spray Test |
| Test Method 61-2013 | Colourfastness to Laundering: Accelerated |

Test Method 135-2014 Dimensional Changes of Fabrics after Home Laundering

2.7 **General Services Administration – US Government**

Federal Standard, Textile Test Methods; (FED-STD No. 191A)

Method 4108 Strength and Elongation, Breaking; Textile Webbing, Tape and Braided Items

2.8 **International Standards Organization (ISO)**

105-B02:2014 Colourfastness to artificial light: Xenon arc fading lamp test

105-C10:2006 (2015) Colourfastness to washing with soap or soap and soda

105-E04:2013 Colourfastness to perspiration

105-X12:2016 Colourfastness to rubbing (Crocking)

4920:2012 Textile fabrics — Determination of resistance to surface wetting (spray test)

6330:2012 Domestic washing and drying procedures for textile testing

7211-2:1984 Textiles – Woven fabrics – Construction – Methods of analysis Part 2: Determination of number of threads per unit length

3. **General Requirements**

3.1 The article or material covered by this specification must be free from material and manufacturing defects that may affect its appearance or serviceability. In all particulars not covered by this specification or contract documents, production must be equivalent in all respects to the viewing sample.

3.2 **Design** – The Soft Body Armour, Carrier, External, Female Panels must be a two piece, vest-like garment which will be used to carry RCMP issue ballistic body armour panels as specified in para. 2.4. The carrier must consist of a front and back and are joined by an internal cummerbund and an external waist strap and adjustable shoulder straps. The front pouch must have a princess seam that conforms to the female anatomy. The carrier must come with chest pockets, permanent POLICE identification markings, and MOLLE attachment webbing on the front and external waist straps.

4. **Detail Requirements**

4.1 **Components**

4.1.1 **Shell Material** – The shell material must be a dark navy in colour, 100% nylon 500 denier ripstop fabric meeting the requirements outlined in Table I. Brookwood product Westridge #FC0500RB has been known to meet the above requirements.

4.1.2 **Lining Material** – The lining must be a spacer mesh black in colour, 100% Polyester fabric, meeting the requirements of Table II. Gehring Textiles style SHR846 has been known to meet the requirement.

4.1.3 **Nylon Webbing**

4.1.3.1 **Webbing, Accessory & Microphone Strap** – The webbing must be a durable nylon webbing, luggage quality, black in colour measuring 2.54 cm (1”) wide and 0.04” ± 0.01” thick. It must have a minimum tensile strength of 1000 lbs. as per Federal Standard 191A test method #4108 and be equal in appearance to the viewing sample. Tape Craft #N0015S-1”-YD001-352 has been known to meet the requirements.

4.1.3.2 **Nylon Webbing, Flap Attachment Tab** - The webbing shall be a durable nylon webbing, luggage quality, black in colour measuring 3.8 cm (1.5”) wide and 0.043” ± 0.01” thick. It shall have a minimum tensile strength of 1500 lbs. as per Federal Standard 191A test method #4108 and be equal in appearance to the viewing sample. Tape Craft #N0015S has been known to meet the requirements.

4.1.4 **Thread**

4.1.4.1 **Seam and Stitching Thread** – The thread must be polyester wrap, polyester core, Tex 50, Type II of matching colour to the shell material, meeting U.S. government standard A-A-50199A.

4.1.4.2 **Reinforce Stitching Thread** – The thread must be a nylon continuous filament bonded, Class A, Type II, size B (Tex 45), meeting U.S. government standard A-A-59826A. It must be black in colour.

4.1.5 **Hook and Loop Tape** – The hook and loop tape must be nylon, black in colour, with a high life cycle. The combined hook and loop must have no less than 8 P.S.I length-wise shear strength with initial peel strength of no less than 1 P.I.W. when

tested to ASTM D5169-98 (2015), standard test method for shear strength [dynamic method] of hook and loop touch fasteners and ASTM D5170-98 (2015), standard test method for peel strength ["T" method] of hook and loop touch fasteners. Dimensions must be as per drawings and pattern template.

4.1.6 **Slide Fastener**

4.1.6.1 **Horizontal Chest Pockets** – The slide fastener must be a 2-way closed end slide fastener, black in colour with auto-locking sliders, two arranged in a head to head relation with one opening to the left and one opening to the right. YKK 13094 CIFMC 59/9 DS6YG C5/DS6YG C5 5/8*BTM-2*H-H* (only). The slide fastener must be available in 6 lengths, 7", 7½", 8", 8½", 9" and 9½".

4.1.6.2 **Interior Access Panel** – The slide fastener must be a 1-way reverse coil closed end slide fastener, black in colour with an auto-locking slider. YKK 61351 5CI 5/8 CHAIN *200 MTS/RL*, and 75492 5CN DS6B C5 SLIDER (only). The slide fastener must be available in 5 lengths: 11½", 14½", 16½", 19½" and 21½".

4.1.7 **Elastic**

4.1.7.1 **Elastic, Back and Cummerbund** – The elastic must be heavy duty woven elastic, with a composition of at least 70% polyester blended with rubber and a medium finish. The elastic must be black in colour, with a stretch and recovery as per component viewing samples. It must be available in five widths: 7.6 cm (3"), 10.2 cm (4"), 12.7 cm (5"), 15.2 cm (6") or 17.8 cm (7").

4.1.7.2 **Elastic, Attachment Strap** – The attachment strap must be heavy duty woven elastic, with a composition of at least 70% polyester blended with rubber and a medium finish. The elastic must be black in colour, 5 cm (2") wide with a stretch and recovery as per component viewing sample.

4.1.8 **Binding Tape** – The binding tape must be heavy duty nylon, grosgrain binding tape, black in colour, 2.54 cm wide and 0.3 mm thickness.

4.1.9 **Neoprene Padding** – The neoprene padding must be made of 100% Nylon on the outer surface and 10% Nylon/ 90% Neoprene as the inner content. It must be $725 \text{ g/m}^2 \pm 25 \text{ g/m}^2$, 2.5 mm thick, black in colour.

4.1.10 **Heat Transfer Vinyl** – The heat transfer vinyl used for the police markings must be a polyurethane composition. The thickness must be 80 microns (.08 mm) with a

stretch and rebound of 3. The vinyl must withstand 50 home launderings after application.

4.2 **Size and Dimensions** – The Soft Body Armour, Carrier, External, Female Panels must be supplied in the sizes specified by the RCMP and to the dimensions provided in document *368 Soft Body Armour, Carrier, External, Female Panels – Scale of Measurements – 8078 Female Sizes* and to the attached drawings forming part of this specification. The female size roll is extensive and includes evenly graded chest, waist and front length measurements to accommodate all body shapes. The first two digits of the five digit size designation represent the chest measurement. The Soft Body Armour, Carrier, External, Female Panel components must be shaped, dimensioned and positioned in accordance with the pattern components and pattern requirements as outlined in Appendix A forming part of this specification.

4.3 **Construction**

4.3.1 **Stitching** – All stitching must be lockstitch. There must be no less than three or more than four stitches per centimeter. The beginning and ending of all stitching must be securely backstitch tacked, unless secured by other stitching. Where seaming, turning and stitching are required the edges must be properly worked out before stitching. Care must be taken to minimize unsightly gathering and puckering. Ball point needles must be used for all stitching through elastic components.

4.3.2 **Body**

4.3.2.1 **Front Pouch – Front View** – The front pouch must be made from the shell material specified in para. 4.1.1, lined with shell material and the lining material specified in para. 4.1.2, and must be sized and shaped to the pattern and the scale of measurements. The front pouch must have a princess seam that conforms to the female anatomy. The shoulder strap portions must have hook tape as specified in para. 4.1.5 for shoulder closure and adjustment. The hook tape must be 5 cm wide by the finished length specified in the component scale of measurements for the appropriate size and be positioned on the face of the shell material at the shoulder edge as per drawing 2. The name tag must be loop tape as per para 4.1.5, 8.5 cm \pm 0.2 cm long by 2.5 cm wide and positioned on the right front as per the patterns and drawing 2. There must be a POLICE marking as specified in para. 4.3.7 and 4.3.7.1 permanently adhered to the shell material. The marking must be centred between the side edges of the pouch and centred between centre of the lower pocket and the top edge of the flap. The lower front portion of the pouch must have one piece of

loop tape centred horizontally and sewn as dimensioned and placed as per pattern template. The loop tape must have sealed edges to prevent fraying. The loop tape must be secured to the pouch with two rows of stitching using a 3 mm and 6 mm gauge along all edges. The bottom edge of each corner of the loop tape must be bar tacked with a 15 mm to 20 mm long bar tack, with no less than 18 cover stitches as per drawing 4.

- 4.3.2.2 **Front Pouch Chest Pockets** – The front of the external carrier must have two horizontal chest pockets one above the other secured by the slide fastener specified in para. 4.1.6.1. Refer to the component scale of measurements for the appropriate length by size. Each end of the horizontal pocket openings must be bar tacked with 15 mm to 20 mm long bar tacks, with no less than 18 cover stitches as per drawing 2. Inside the top chest pocket must be a notebook pocket and a pen loop dimensioned as per the pattern and drawing 7.
- 4.3.2.3 **Front Pouch Flap** – The front flap must be made of shell material as specified in para 4.1.1 and must have an extra layer of shell material used as an interlining for reinforcement. The front flap must have 4 pieces of hook tape dimensioned as per pattern template, placed on the underside of the flap, positioned according to drawing 3. Depending on the size of the carrier, the front flap must have 3 or 4 rows of webbing as specified in para. 4.1.3.1 and placed as per the pattern template. Refer to the scale of measurements for the number of rows by size. Each row of webbing must be secured with vertical reinforced zig zag stitching 3 mm wide at intervals of $3.8\text{ cm} \pm 0.1\text{ cm}$ across the flap through all layers as per pattern template and drawings 2 and 3. The reinforced stitching must be done using thread as specified in para. 4.1.4.2. Care must be taken to ensure the webbing does not pull or buckle and that there are no broken or dropped stitches when the reinforced stitching is done to secure the webbing. The finished flap must be secured to the pouch with two rows of stitching using a 3 mm and 6 mm gauge along the flap's top edge. The top edge of each corner of the flap must be bar tacked with a 15 mm to 20 mm long bar tack, with no less than 18 cover stitches as per drawing 2.
- 4.3.2.4 **Front Pouch Attachment Tab** – There must be attachment tabs sewn between the flap layers at the bottom corners of the front flap. The attachment tabs must be made with nylon webbing as specified in para. 4.1.3.2 with a finished dimension of $3.8\text{ cm} \times 7.5\text{ cm} \pm 0.2\text{ cm}$. The attachment tabs must have a finger loop and a piece of hook tape as specified in para. 4.1.5, measuring $3.8\text{ cm} \times 4.5\text{ cm} \pm 0.2\text{ cm}$ sewn to the back side of the tab. The attachment tabs must be constructed and dimensioned as per drawing 3.

- 4.3.2.5 **Front Pouch – Back View** – The back of the front pouch must be made with shell material as specified in para. 4.1.1 and lining material specified in para. 4.1.2 and must be shaped and dimensioned as per pattern. The lining must be bound with the binding tape as specified in para. 4.1.8 around all edges and then sewn on top of the shell material as per drawing 2. The upper and lower facing must be made from shell material as specified in para. 4.1.1. There must be two pieces of loop tape measuring 3.8 cm x 5 cm \pm 0.2 cm positioned at the bottom of the lower piece as per the pattern template and drawing 2. The back view of the pouch must have a slide fastener as per drawing 10. Refer to the component scale of measurements for the appropriate slide fastener length by size. The slide fastener must be as specified in para. 4.1.6.2. If stoppers are not being used on the slide fastener, then there must be two layers of vertical stitching through all layers to secure the slide fastener as per drawing 10. The marking and cleaning instructions label as specified in para. 4.3.8 must be sewn to the slide fastener seam as per drawing 2 on the inside of the opening. Inside the pouch at each shoulder strap is an attachment strap as per para. 4.3.5.
- 4.3.2.6 **Back Pouch – Front View** – The back pouch front view must be made from the shell material specified in para. 4.1.1 and must be sized and shaped to the scale of measurements and pattern. The front view is two pieces. The lower back is sewn to the upper back piece across the back at the armhole level creating a loose end. The side edges of the loose end must be double folded and topstitched the full length using an 8 mm gauge. At the double folded edge where the upper back loose end overlaps the lower piece near the stitching line, the upper back folded seam must be topstitched to the lower back piece from the armhole seam to within 0.5 cm of the waist strap using a 3 mm gauge. There must be 1 cm long bar tacks, with no less than 18 cover stitches, starting 0.5 cm from the top of the waist strap and from the bottom of the waist strap as per drawing 5. Under the cover at the center back, a side waist strap as specified in para. 4.3.4 must be stitched securely with a triple row of stitching and three 1 cm long bar tacks with no less than 18 cover stitches must be installed in the middle and at each end of the stitching as per drawing 5. At the shoulder strap, there must be webbing as specified in para. 4.1.3.1, sewn 1.2 cm \pm 0.2 cm from the edge. The total length of the webbing must fit across shoulder strap and be sewn on top at each seam to create a loop. The webbing ends must be sealed to prevent fraying. There must be a POLICE marking as specified in para. 4.3.7 and 4.3.7.1 permanently adhered to the shell material. The marking must be centered between the sides of the pouch and be placed 5 cm \pm 0.5 cm below the back neckline. There must be a cummerbund as specified in para. 4.3.3 dimensioned as per pattern sewn into the side seams of the back pouch as per pattern placement.

- 4.3.2.7 **Back Pouch – Back View** – The body side of the back pouch must be made with shell material as specified in para. 4.1.1 and lining material specified in para. 4.1.2 and must be shaped and dimensioned as per pattern. The lining must be bound with the binding tape as specified in para. 4.1.8 around all edges and then sewn on top of the shell material as per drawing 6. The upper and lower facing must be made from shell material as specified in para. 4.1.1. The back view of the pouch must have a slide fastener as per drawing 10. Refer to the component scale of measurements for the appropriate slide fastener length by size. The slide fastener must be as specified in para. 4.1.6.2. If stoppers are not being used on the slide fastener, then there must be two layers of vertical stitching through all layers to secure the slide fastener as per drawing 10. The marking and cleaning instructions label as specified in para. 4.3.8 must be sewn to the slide fastener seam as per drawing 6 on the inside of the opening. Inside the pouch at each shoulder strap is an attachment strap as per para. 4.3.5. Loop tape 5 cm wide must be applied to the body side of the shoulder strap as per drawing 8. Refer to the component scale of measurements for the appropriate length by size. The loop tape must be placed in line with the shoulder top edge.
- 4.3.3 **Cummerbund** – The cummerbund must be made of a double layer of elastic as specified in para. 4.1.7.1. Refer to the component scale of measurements for the appropriate elastic width by size. The right cummerbund must have hook tape as specified in para. 4.1.5, 10.2 cm \pm 0.5 cm in length by the width of the elastic sewn on top of the elastic. The elastic must be inserted into the back pouch side seam with the hook tape facing the back pouch front view when laid flat. The left cummerbund must have loop tape as specified in para. 4.1.5 10.2 cm \pm 0.5 cm in length by the width of the elastic is sewn on the top of the elastic. There must be an extension grip made of shell material as specified in para. 4.1.1 dimensioned as per the pattern inserted between the folded edge of elastic and the loop tape as per drawing 9. The elastic must be inserted into the back pouch side seam with the loop tape facing the back pouch back view when laid flat. Refer to drawing 6 for placement.
- 4.3.4 **Side Waist Strap** – The side waist strap must be made of a double layer of elastic as specified in para. 4.1.7.1, shell material as specified in para 4.1.1 and must have an extra layer of shell material used as an interlining for reinforcement. The waist strap must be sized and shaped as per the pattern. Each end of the double elastic must be joined to one end of the waist strap. The waist strap must have 3 rows of webbing as specified in para. 4.1.3.1 and placed as per pattern template. Each row of webbing must be secured with vertical reinforced zig zag stitching 3 mm wide

at intervals of $3.8 \text{ cm} \pm 0.1 \text{ cm}$ across the webbing through all layers as per drawings 5 and 6. The reinforced stitching must be done using thread as specified in para. 4.1.4.2. Care must be taken to ensure the webbing does not distort the shell material and that there are no broken or dropped stitches when the reinforced stitching is done to secure the webbing. Both ends of the waist strap must have a piece of loop tape next to the webbing and a piece of hook tape on the opposite side. Refer to drawings 5 and 6 and the pattern template for size and placement. Refer to the component scale of measurements for the appropriate elastic width by size.

- 4.3.5 **Attachment Straps** – Inside the front and back pouch at each shoulder strap is an attachment strap to hold the ballistic panel in place. The attachment strap must measure 5 cm wide by the finished length specified in the component scale of measurements for the appropriate size and be positioned as per the pattern template. The top portion of the attachment strap must be made from elastic as specified in para. 4.1.7.2 and must measure $10 \text{ cm} \pm 0.5 \text{ cm}$ in length. The bottom portion of the attachment strap must be made from loop tape as specified in para. 4.1.5. The loop tape must measure 5 cm wide by the length specified in the component scale of measurements. The loop tape must be stitched to the elastic and overlap by $2 \text{ cm} \pm 0.2 \text{ cm}$. The loop tape surface must face the body side to ensure proper adherence to the ballistic panels. On the front pouch, the first 5 cm of elastic must be stitched to the back side of the front view shell material. On the back pouch, the first 5 cm of elastic must be stitched to the back side of the back view or may be stitched through to the front view. It must be stitched in a box and 'X' pattern within the lower stitching line as per the pattern template and drawing 8.
- 4.3.6 **Removable Shoulder Padding** – There must be a removable shoulder pad for each shoulder strap, 5 mm thick with $\pm 1 \text{ mm}$ tolerance made from 2 layers of neoprene as specified in para. 4.1.9 and covered with black nylon fabric. The shoulder padding must be inserted in each front shoulder strap, between the shell and the mesh lining. It must be sized as $4.8 \text{ cm} \pm 0.5 \text{ cm}$ wide by $15.2 \text{ cm} \pm 0.5 \text{ cm}$ long and be equal in all respects to the pattern and viewing sample.
- 4.3.7 **POLICE Markings** – The front pouch front view and the back pouch front view must have permanent POLICE markings applied using heat-transfer method. The heat transfer material used must be as specified in para. 4.1.10. The font must be Arial as indicated in the drawings. The letter colour must be opaque white with no grin through of the shell material. The marking must be able to withstand normal washing and drying at least 50 times without degradation of the colour or permanency. There must be no loose or un-bonded edges or corners.

- 4.3.7.1 **POLICE Markings – Sizes** – The Police markings must be available in three sizes. Size I must be used on the front pouch on chest sizes 32 through 38. Size II must be used on the back pouch on chest sizes 32 through 38 and the front pouch on chest sizes 40 and up. Size III must be used on the back pouch on chest sizes 40 and up. The dimensions for each size are listed below.

Size I: 4.8 cm x 16.1 cm

Size II: 5.5 cm x 18 cm

Size III: 7.5 cm x 23.5 cm

- 4.3.8 **Marking & Cleaning Instructions Label** – Both the front pouch and the back pouch must have a durable label positioned and sewn to the slide fastener seam inside each pouch as shown in drawing 2 and 6. The text must be permanent inks of a contrasting colour and must withstand at least 50 washes with no apparent change in appearance. All text except for the RCMP stock number and size must be in size 6 font. The RCMP stock number and size must appear in size 8 font. The manufacturer's identification must not appear anywhere on the garment except where indicated on the label. The label must contain the following information in English and French.

1. Item name in English as written in Para. 1.1.
2. Item name in French as written in Para. 1.1.
3. RCMP stock number - reference contract documents. (Ex. 8078 100).
4. Size (Ex. 38333)
5. Date of manufacture, in numeric format year/month (Ex. 2018/11)
6. Your manufacturer identification (Company name or number).
7. Name of RCMP member
8. Reg. #.
9. Order number as printed on order document.
10. Print information as shown below.

1		
2		
3		
4		
5		
6		
7		
8		
9		
10	Machine wash - cool (30°C) Wash separately Use minimal soap Double Rinse to remove all soap residue	Laver à la machine – à l'eau froide (30°C) Laver séparément Utiliser le moins de savon possible Rincer deux fois pour éliminer tout résidu de savon
	Do Not use fabric softener or chlorine bleach	Ne pas utiliser d'agent adoucissant ou d'agent de blanchiment
	Tumble dry- low (Do Not use dryer sheets)	Séchage par culbutage – à basse température (Ne pas utiliser d'assouplissant en feuilles)
	Steam iron - low	Repassage à vapeur - à basse température
	Warning: Remove SBA panels before laundering	Veuillez enlever les panneaux de protection avant le lavage.

4.3.9 **Packaging** – The carrier must be assembled at the waist.

5. **Quality Assurance Provisions**

5.1 **Responsibility for Inspection** – Unless otherwise stipulated in the contract, it is the prime contractor's responsibility to satisfy the RCMP, Uniform & Equipment Program that the material and services being supplied conform to this specification. This may be accomplished by performing the tests specified in this specification or by demonstrating to the satisfaction of the RCMP, Uniform & Equipment Program that conformity to this specification of manufacturing processes is assured. The contractor must use a commercial testing establishment acceptable to the RCMP, Uniform & Equipment Program.

5.2 The RCMP, Uniform & Equipment Program reserves the right to perform any inspection considered necessary to ensure the material and services conform to the specified requirements. For the purpose of inspection, a portion of each delivery not exceeding two percent or two out of any number delivered under 100 may be

put to tests that could destroy the articles. If found to be inferior or not in accordance with this specification, all articles so destroyed must be replaced by others of proper quality and pattern at the expense of the contractor. The entire delivery may also be rejected if it is found that articles previously rejected due to non-repairable defects are redelivered for inspection.

- 5.3 The contractor will be promptly notified when any articles are not accepted and such articles will be replaced/repared at the contractor's risk and expense.

6. **Scale of Measurement Definitions and Location References**

Refer to drawing 11 for the corresponding scale of measurement location. The scale of measurements are provided in a separate document *368 Soft Body Armour, Carrier, External, Female Panels – 8078 Female Sizes*. The measurements are taken on the body side of each panel.

Front Pouch

- 6.1 **Center Front Length** – The length must be measured from the base of the neckline to the hem. (A).
- 6.2 **Front Upper Chest Width** – The width must be measured across the front at the level of the lower chest pocket. (B).
- 6.3 **Front Chest Width** – The width must be measured across the front at the widest point of the top edge of the side wing from edge to edge. (C).
- 6.4 **Front Waist Width** – The width must be measured across the widest point at the bottom of the pouch from edge to edge. (D).
- 6.5 **Front Side Wing Height** – The height must be measured at the side from top to bottom 2.5 cm from the side edge. (E).

Back Pouch

- 6.6 **Center Back Length** – The length must be measured from the base of the neckline to the hem. (F).
- 6.7 **Back Upper Width** – The width must be measured across the back, 8.5 cm below the back neckline. (G).
- 6.8 **Back Chest Width** – The width must be measured across the back at the widest point of the top edge of the side wing from edge to edge. (H).
- 6.9 **Back Waist Width** – The width must be measured across the widest point at the bottom of the pouch from edge to edge. (J).
- 6.10 **Back Side Wing Height** – The height must be measured at the side from top to bottom, 2.5 cm from the side edge. (K).

TABLE I
Shell Material Testing Requirements

REQUIREMENT				TEST METHODS
1	Colour	Dark Navy, to match swatch available from RCMP Uniform & Equipment Program		
2	Fibre Content	100% Nylon		<ul style="list-style-type: none">CAN/CGSB-4.2 No. 14-2005
3	Weave	Ripstop		<ul style="list-style-type: none">Visual
4	Mass	235-270 g/m ² ± 14g/m ²		<ul style="list-style-type: none">CAN/CGSB-4.2 No. 5.1-M90 (R2013) ORASTM D3776/D3776M-09a (R2013)
5	Yarns per cm	Warp:	18 min.	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 6-2013 ORISO 7211-2:1984
		Weft:	14.5 min.	
6	Breaking Strength - Grab Method Constant-rate-of-extension (CRE) machine	Warp:	1480 N min	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 9.2-M90 (R2013) ORASTM D5034-09 (R2013)
		Weft:	1320 N min	
7	Tearing Strength - Rip Method Constant-rate-of-extension (CRE) machine	Warp:	175 N min	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 12.1-2016
		Weft:	175 N min	
8	Abrasion Resistance - Martindale Tester	No breakdown after 70,000 rubs		<ul style="list-style-type: none">ASTM D4966-12 (R2016) Option 1
9	Dimensional Change in Domestic Laundering (cool wash 40°C)	Warp:	2% max	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 58-2004 Wash procedure I, Dry procedure E
		Weft:	2% max	
10	Resistance to Surface Wetting - Spray Method	Initial	100	<ul style="list-style-type: none">ISO 4920:2012 ORAATCC Test Method 22-2017 <u>Washing:</u> <ul style="list-style-type: none">ISO 6330:2012Wash Procedure 5B, Dry Procedure F
		After 5 washes	70 or better	
11	Colourfastness - To Light – Xenon Arc Method	Blue wool Standard L6 or better		<ul style="list-style-type: none">ISO 105-B02:2014, Method 3
12	Colourfastness - To Crocking	Dry:	Gray Scale 4 or better	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 22-2004 (R2013) ORISO 105-X12:2016
		Wet:	Gray Scale 4 or better	
13	Colourfastness - To Perspiration	Acid:	Gray Scale 4 or better	<ul style="list-style-type: none">CAN/CGSB-4.2 No. 23-M90 (R2013) ORISO 105-E04:2013
		Alkaline:	Gray Scale 4 or better	
14	Colourfastness - To Laundering (cool wash 40°C)	Gray Scale 4 or better		<ul style="list-style-type: none">CAN/CGSB-4.2 No. 19.1-2004 (R2013) Test 1 ORISO 105-C10:2006 (R2015)

TABLE II
Lining Material

REQUIREMENT			TEST METHODS
1	Colour	Black	
2	Fibre Content	100% Polyester	• CAN/CGSB-4.2 No. 14-2005
3	Knit	Double Needle Bar Mesh	• Visual
4	Mass	556 g/m ² ± 54 g/m ² 16.4 oz/yd ² ± 1.6 oz/yd ²	• CAN/CGSB-4.2 No. 5.1-M90 (R2013) OR • ASTM D3776/D3776M-09a (R2013)
5	Yarns per inch	Wales: 11 ± 2	• ASTM D8007-15 ^{e1}
		Courses: 22 ± 2	
6	Dimensional Change in Domestic Laundering (cool wash 30°C)	Warp: 3% max	• AATCC Test Method 135-2014 Wash cycle I, Dry procedure A iii
		Weft: 3% max	
7	Thickness	6.6 mm ± 0.66 mm 0.261" ± 0.026"	• ASTM D1777-96 (2015) Testing Option 1
8	Colourfastness - To Crocking	Dry: Gray Scale 3.5 or better	• AATCC Test Method 8-2016 (95-100% moisture pickup)
		Wet: Gray Scale 3.5 or better	
9	Colourfastness - To Perspiration	Acid: Gray Scale 4 or better	• AATCC Test Method 15-2013
		Alkaline: Gray Scale 4 or better	• See note 13.1 for Alkaline test
10	Colourfastness - To Laundering	Gray Scale 3.5 or better	• AATCC Test Method 61-2013 Test 1A

APPENDIX A

Sealed Pattern Identifier

Pattern #: G.S. 1045-368 Soft Body Armour, Carrier, External, Female Panels
 Title: Stock # 8078 Soft Body Armour, Carrier, External, Female Panels

Patterns - Patterns are available from the RCMP, Uniform and Equipment Program. Firms requested to produce Pre-Award Samples will be provided with the requested size pattern only. The full set of patterns in individual sizes will be provided to the successful bidder after the contract is awarded. The bidder will receive the files electronically in a .DXF format.

The patterns include seam allowances, drill holes and/or placement templates. All pieces must be cut in the direction indicated on the grain line of the pattern pieces. Manufacturers are required to make changes to the pattern if necessary in order to meet the scale of measurements and/or to suit the production process, however, the design and grade must not be affected or changed.

All patterns are the property of the RCMP and must be returned and/or deleted upon completion of the contract.

Pattern Pieces - The design has 29 pattern components.

Material and Cutting Legend

Shell Material	= Para. 4.1.1
Lining Material	= Para. 4.1.2
Neoprene	= Para. 4.1.9
Cut 1 Single	= Cut 1
Cut 1 Paired	= Cut 2
Cut 2 Paired	= Cut 4

Pattern Components	Nomenclature	Quantity to be cut	Material
# 1 of 29	Back	1 Single	Shell Material
# 2 of 29	Lower Back	1 Single	Shell Material
# 3 of 29	Centre Front	1 Single	Shell Material
# 4 of 29	Side Front	1 Paired	Shell Material
# 5 of 29	Front Flap	1 Single	Shell Material

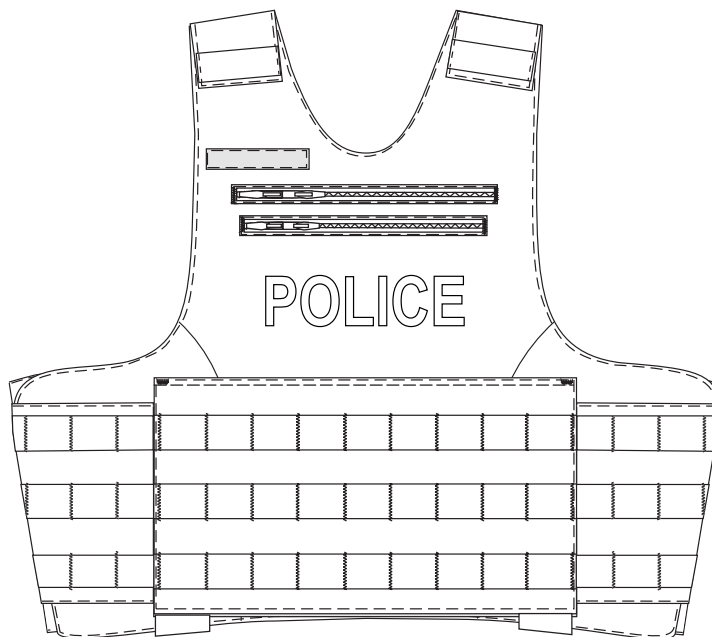
Pattern Components	Nomenclature	Quantity to be cut	Material
# 6 of 29	Upper Pocket Welt	1 Single	Shell Material
# 7 of 29	Lower Pocket Welt	1 Single	Shell Material
# 8 of 29	Pocket Upper Front	1 Single	Shell Material
# 9 of 29	Pocket Notebook	1 Single	Shell Material
# 10 of 29	Pocket Upper Front Facing	1 Single	Shell Material
# 11 of 29	Lower Pocket	1 Single	Shell Material
# 12 of 29	Pen/Pencil Loop	1 Single	Shell Material
# 13 of 29	Back Lower Facing	1 Single	Shell Material
# 14 of 29	Back Upper Facing	1 Single	Shell Material
# 15 of 29	Front Lower Facing	1 Single	Shell Material
# 16 of 29	Centre Front Upper Facing	1 Single	Shell Material
# 17 of 29	Side Front Upper Facing	1 Paired	Shell Material
# 18 of 29	Zip Ends	2 Paired	Shell Material
# 19 of 29	Back Upper Lining	1 Single	Lining Material
# 20 of 29	Front Upper Lining	1 Single	Lining Material
# 21 (a) of 29	Side Elastic Cumberbund	1 Paired	Elastic (7.6 cm – 3’')
# 21 (b) of 29	Side Elastic Cumberbund	1 Paired	Elastic (10.2 cm – 4’')
# 21 (c) of 29	Side Elastic Cumberbund	1 Paired	Elastic (12.7 cm – 5’')
# 21 (d) of 29	Side Elastic Cumberbund	1 Paired	Elastic (15.2 cm – 6’')
# 22 (a) of 29	Cumberbund Extension Grip (7.6 cm – 3’')	1 Single	Shell Material
# 22 (b) of 29	Cumberbund Extension Grip (10.2 cm – 4’')	1 Single	Shell Material
# 22 (c) of 29	Cumberbund Extension Grip (12.7 cm – 5’')	1 Single	Shell Material
# 22 (d) of 29	Cumberbund Extension Grip (15.2 cm – 6’')	1 Single	Shell Material

Pattern Components	Nomenclature	Quantity to be cut	Material
# 23 of 29	Side Waist Strap with Loop Template	1 Paired	Shell Material
# 24 of 29	Side Waist Strap with Hook Template	1 Paired	Shell Material
# 25 of 29	Side Waist Strap Reinforcement	1 Paired	Shell Material
# 26 of 29	Front Flap Reinforcement	1 Single	Shell Material
# 27 (a) of 29	Centre Back Waist Strap	1 Paired	Elastic (10.2 cm – 4’')
# 27 (b) of 29	Centre Back Waist Strap	1 Paired	Elastic (12.7 cm – 5’')
# 27 (c) of 29	Centre Back Waist Strap	1 Paired	Elastic (15.2 cm – 6’')
# 27 (d) of 29	Centre Back Waist Strap	1 Paired	Elastic (17.8 cm – 7’')
# 28 of 29	Shoulder Padding	2 Paired	Neoprene
# 29 of 29	Shoulder Padding - Cover	2 Paired	Nylon Lining

Drawing 1

G.S. 1045 - 368

Soft Body Armour, Carrier, External, Female Panels



Front View



Back View

NOT TO SCALE

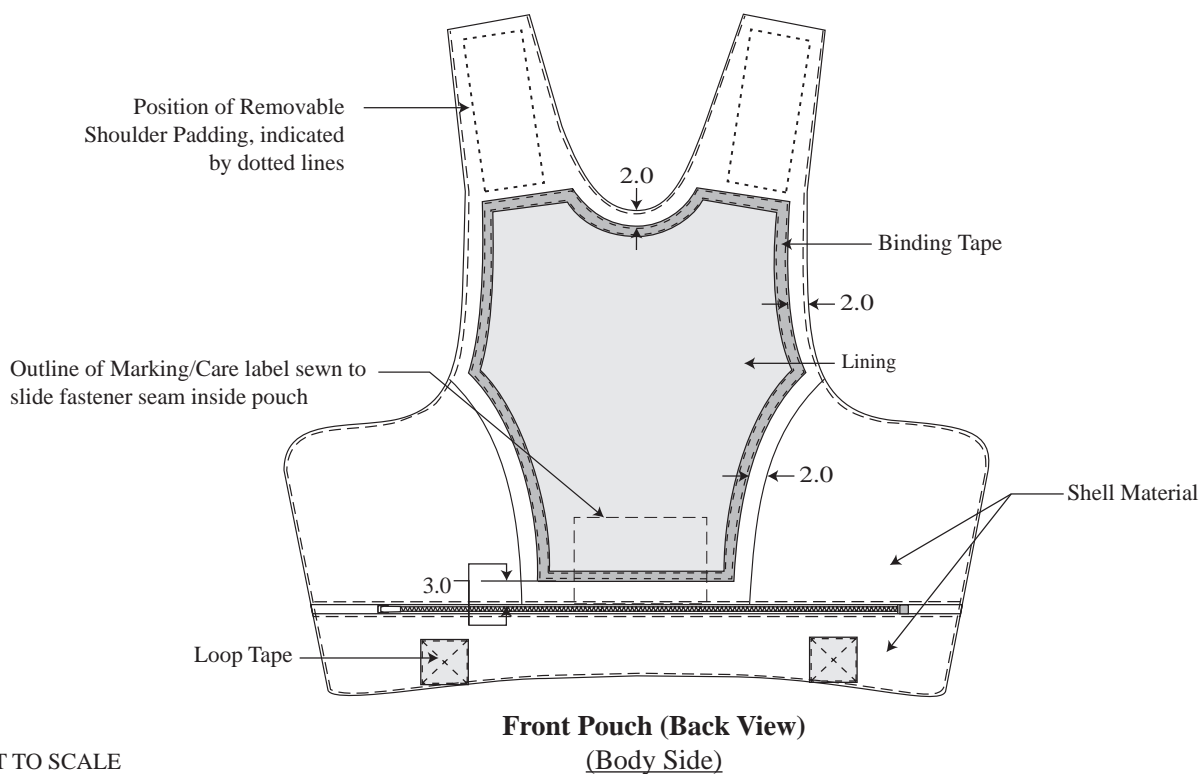
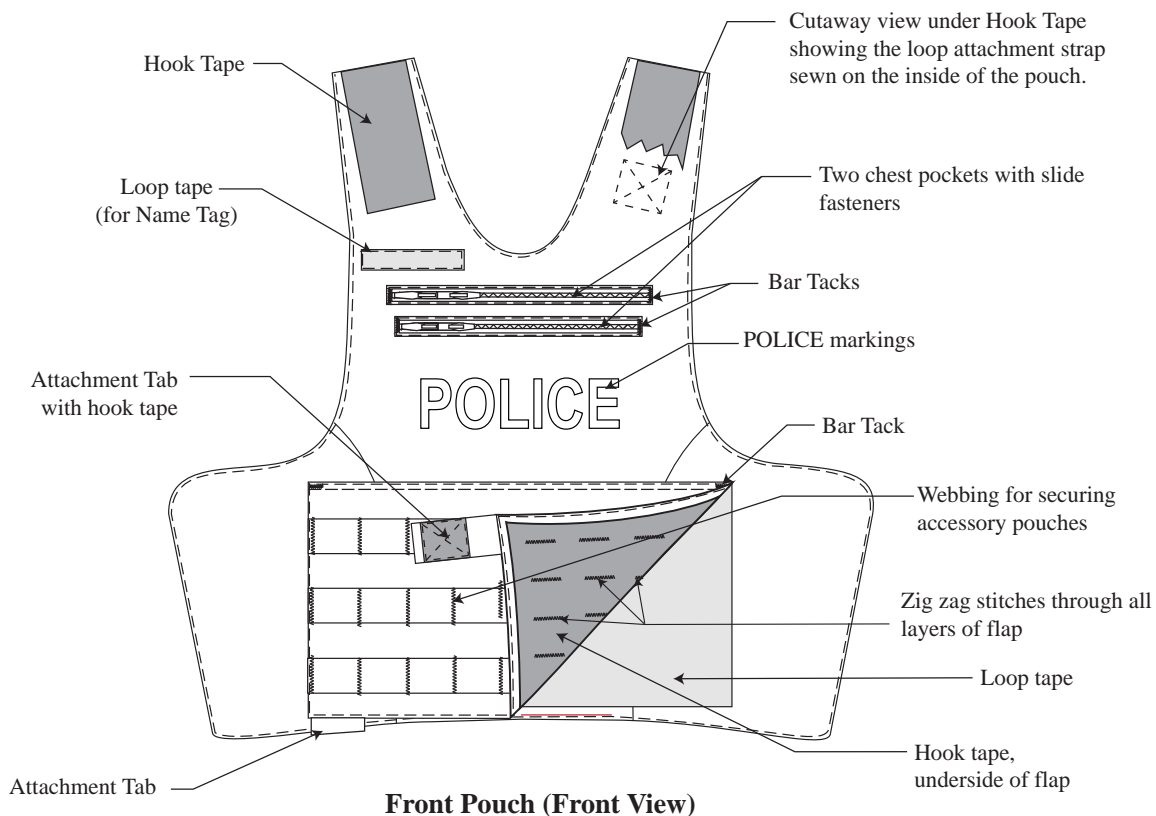
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

Drawing 2

G.S. 1045 - 368

Soft Body Armour, Carrier, External, Female Panels Front Pouch



NOT TO SCALE

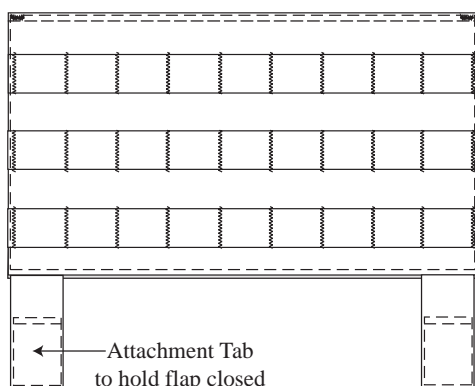
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

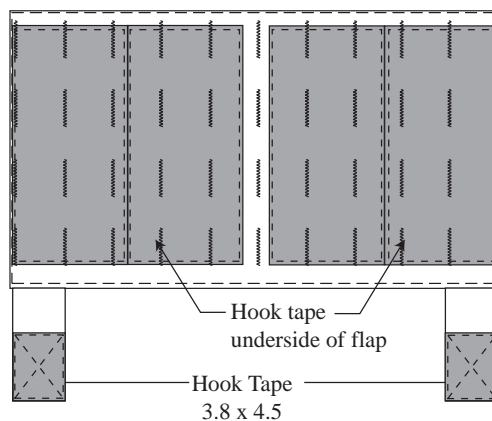
Drawing 3

G.S. 1045-368

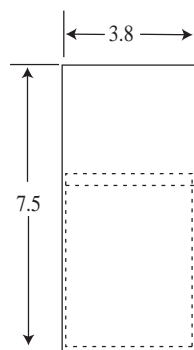
Soft Body Armour, Carrier, External, Female Panels Flap and Attachment Tab



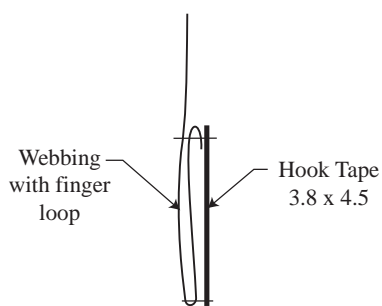
Front Flap (Front View)



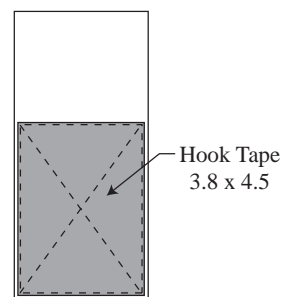
Front Flap (Back View)



Front View



Side View



Back View

Attachment Tab Detail

NOT TO SCALE

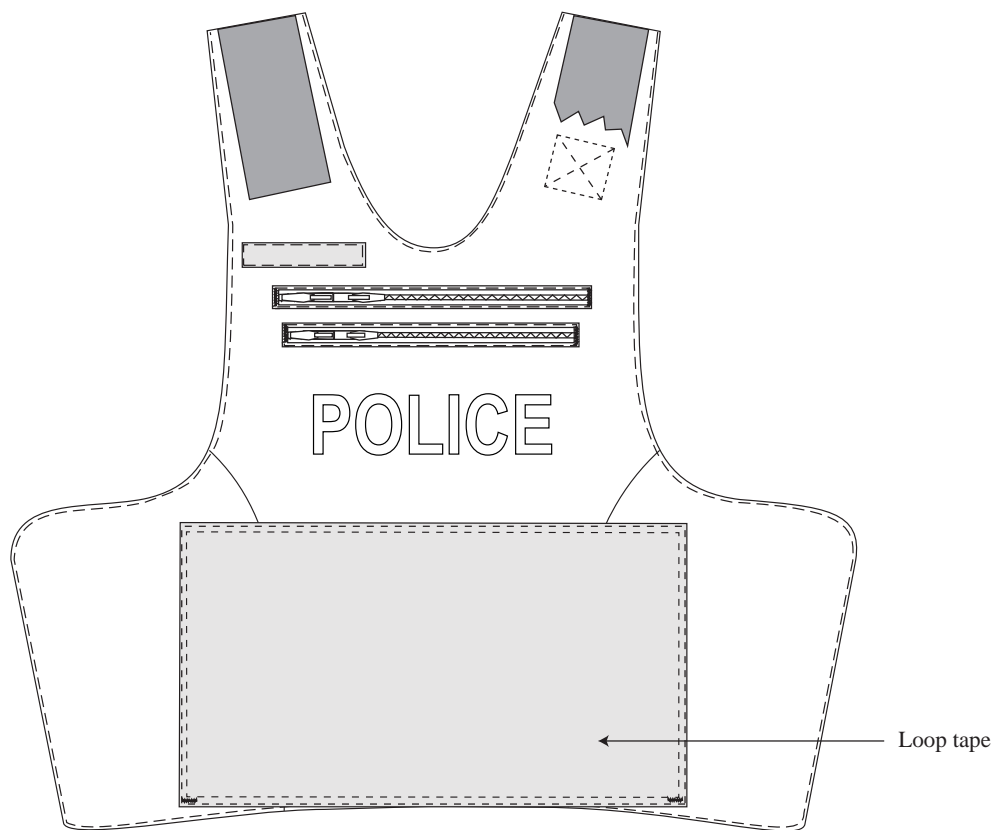
All measurements are shown in centimeters.

± 0.2 cm tolerance acceptable unless otherwise indicated.

Drawing 4

G.S. 1045-368

Soft Body Armour, Carrier, External, Female Panels
Front Pouch



Front Pouch (shown without flap)

NOT TO SCALE

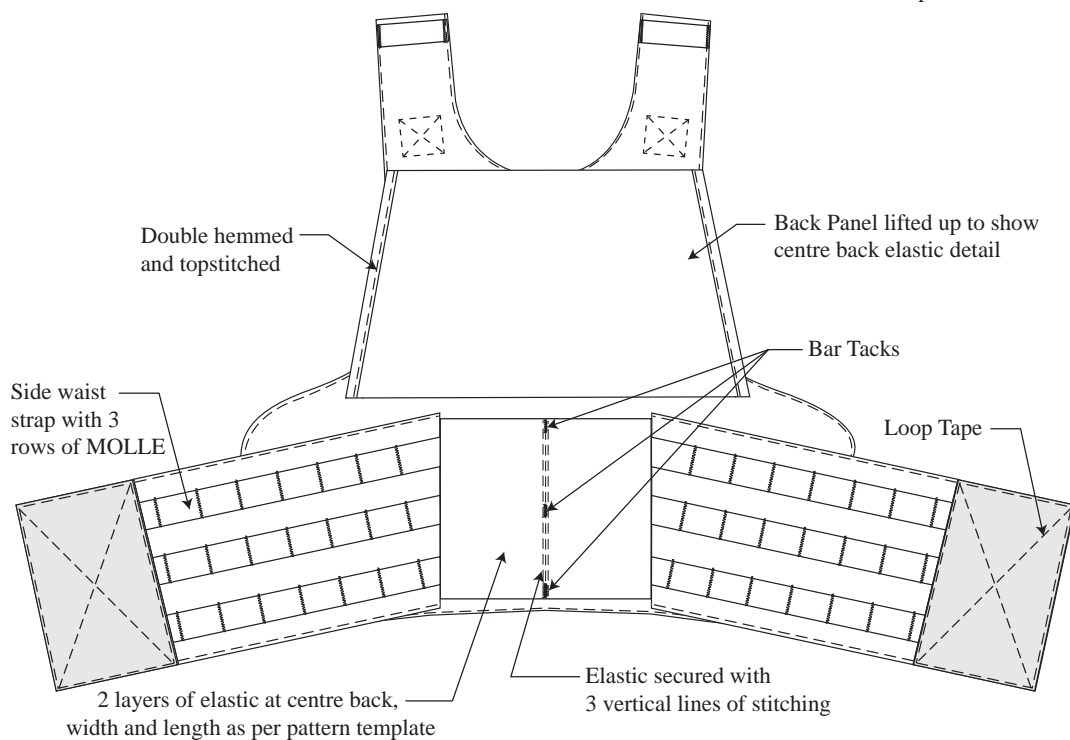
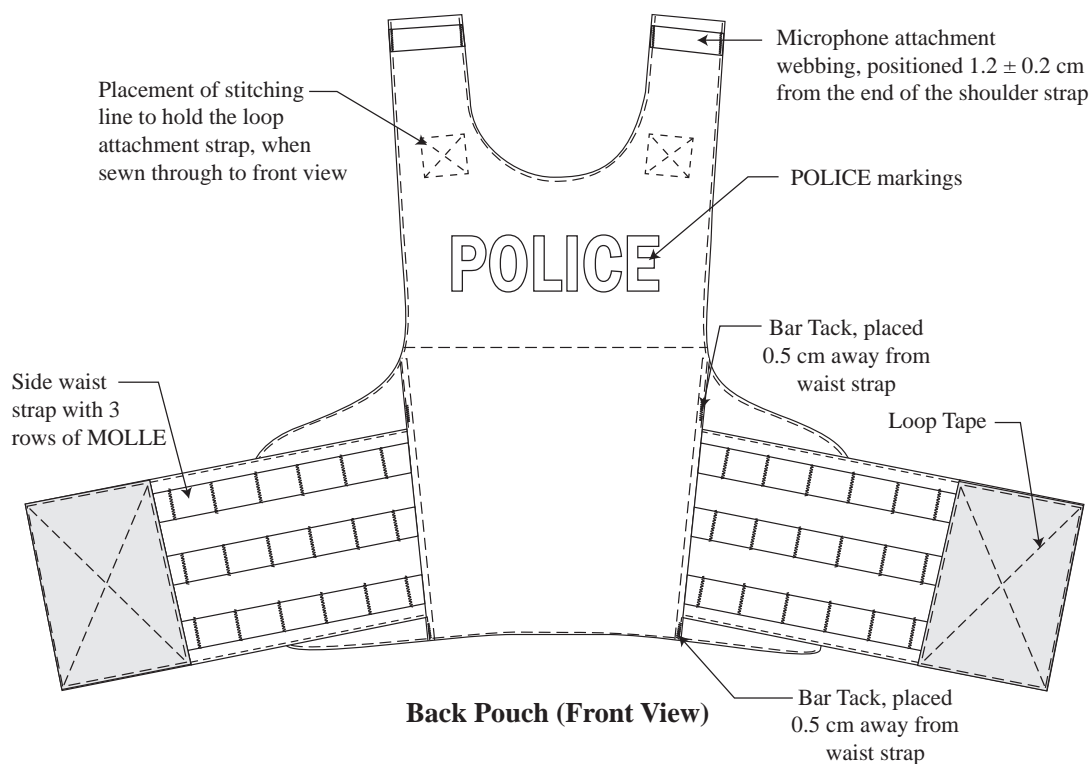
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

Drawing 5

G.S. 1045 - 368

Soft Body Armour, Carrier, External, Female Panels Back Pouch



NOT TO SCALE

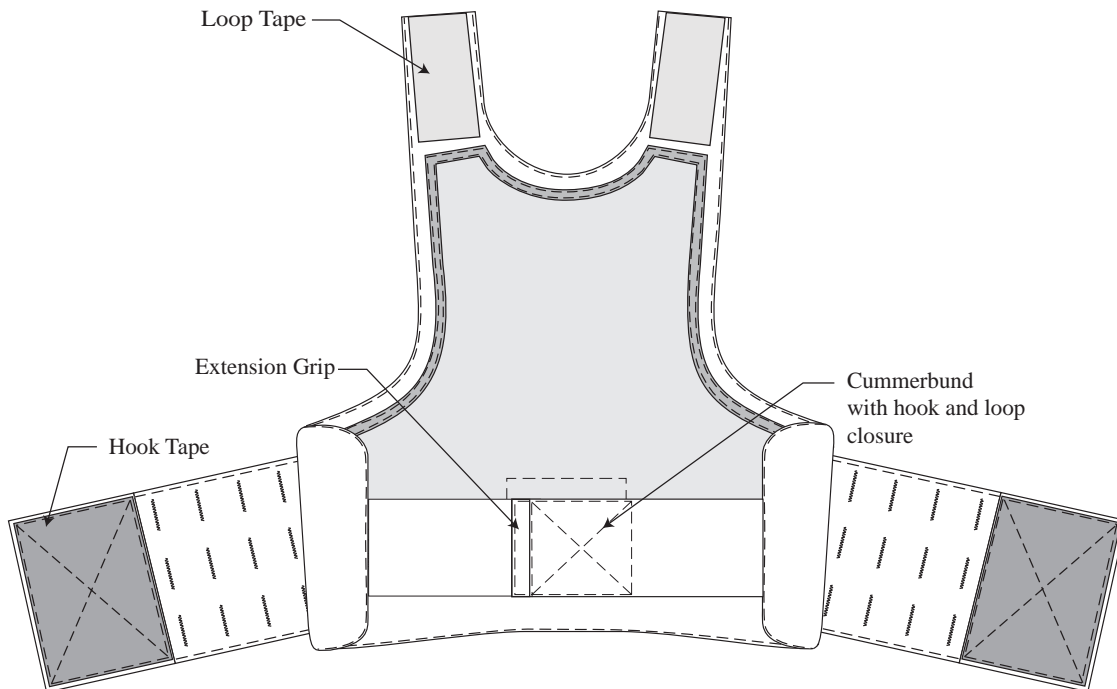
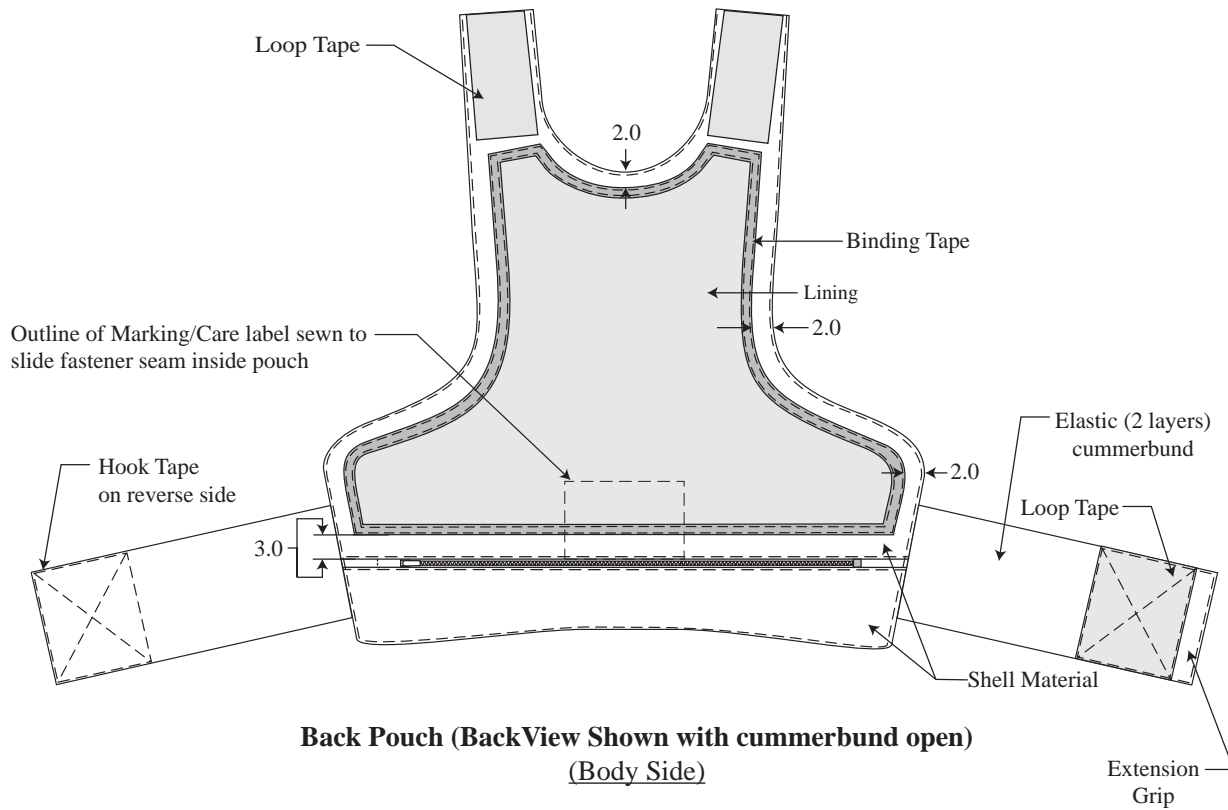
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

Drawing 6

G.S. 1045-368

Soft Body Armour, Carrier, External, Female Panels Back Pouch, Cummerbund detail



NOT TO SCALE

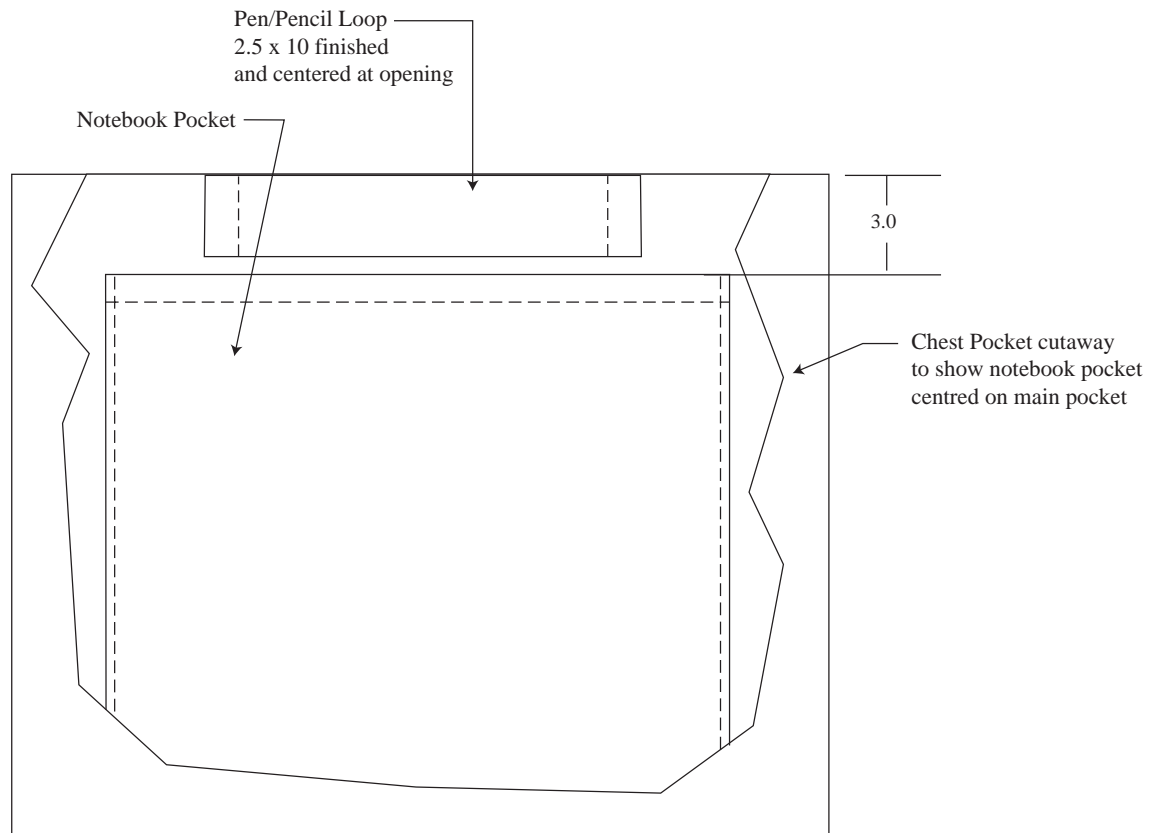
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

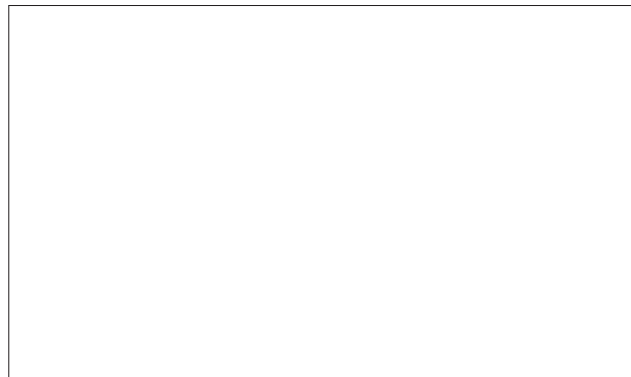
Drawing 7

G.S. 1045-368

Soft Body Armour, Carrier, External, Female Panels
Chest Pockets Detail
(Welted Opening with Slide Fastener Closure not shown)



Upper Chest Pocket Bag and Inside Notebook Pocket



Lower Chest Pocket Bag

NOT TO SCALE

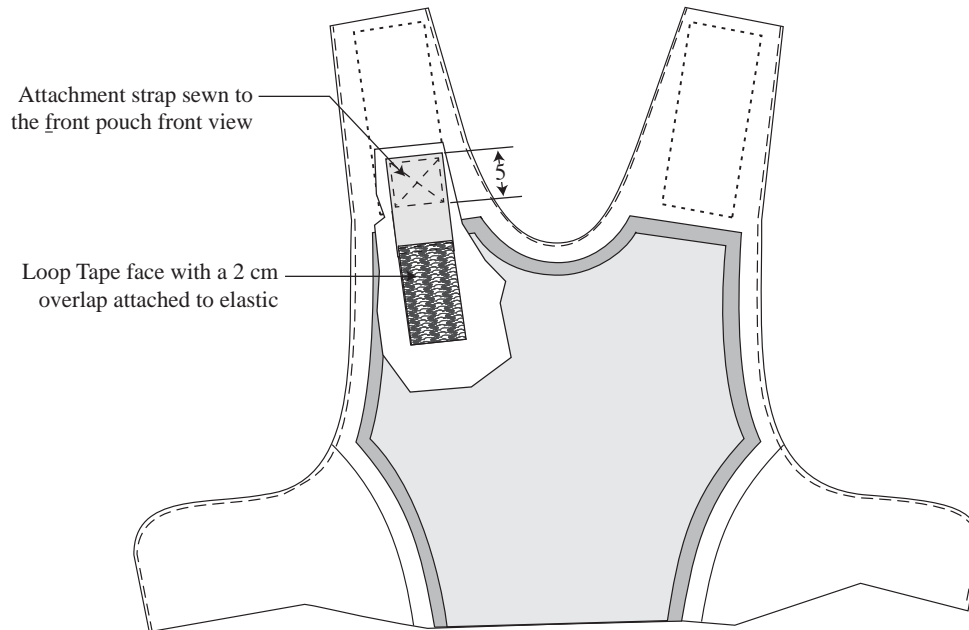
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

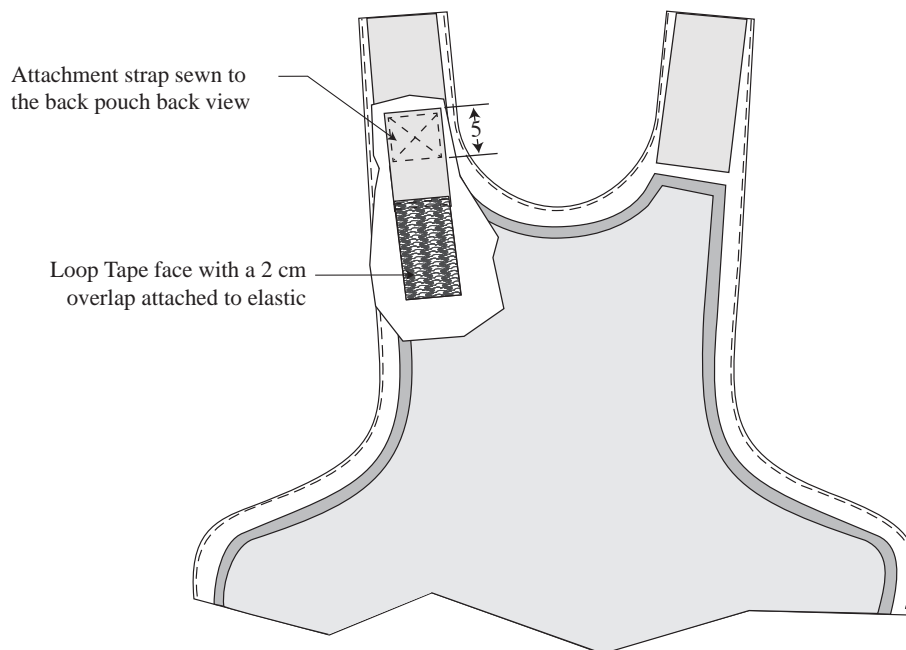
Drawing 8

G.S. 1045 - 368

Soft Body Armour, Carrier, External, Female Panels
Cutaway View, Front and Back Pouches, showing
Attachment Strap



Front Pouch Detail
Back View (Body Side)



Back Pouch Detail
Back View (Body Side)

NOT TO SCALE

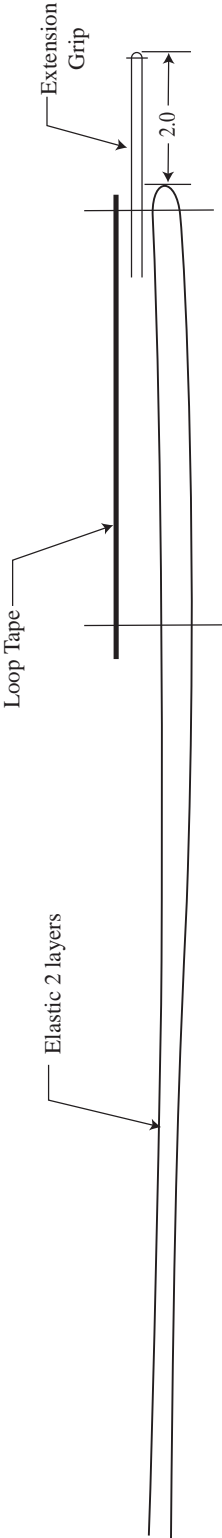
All measurements are shown in centimeters.

± 0.2 cm tolerance acceptable unless otherwise indicated.

Drawing 9

G.S. 1045-368

Soft Body Armour, Carrier, External, Female Panels
Left Cummerbund Detail



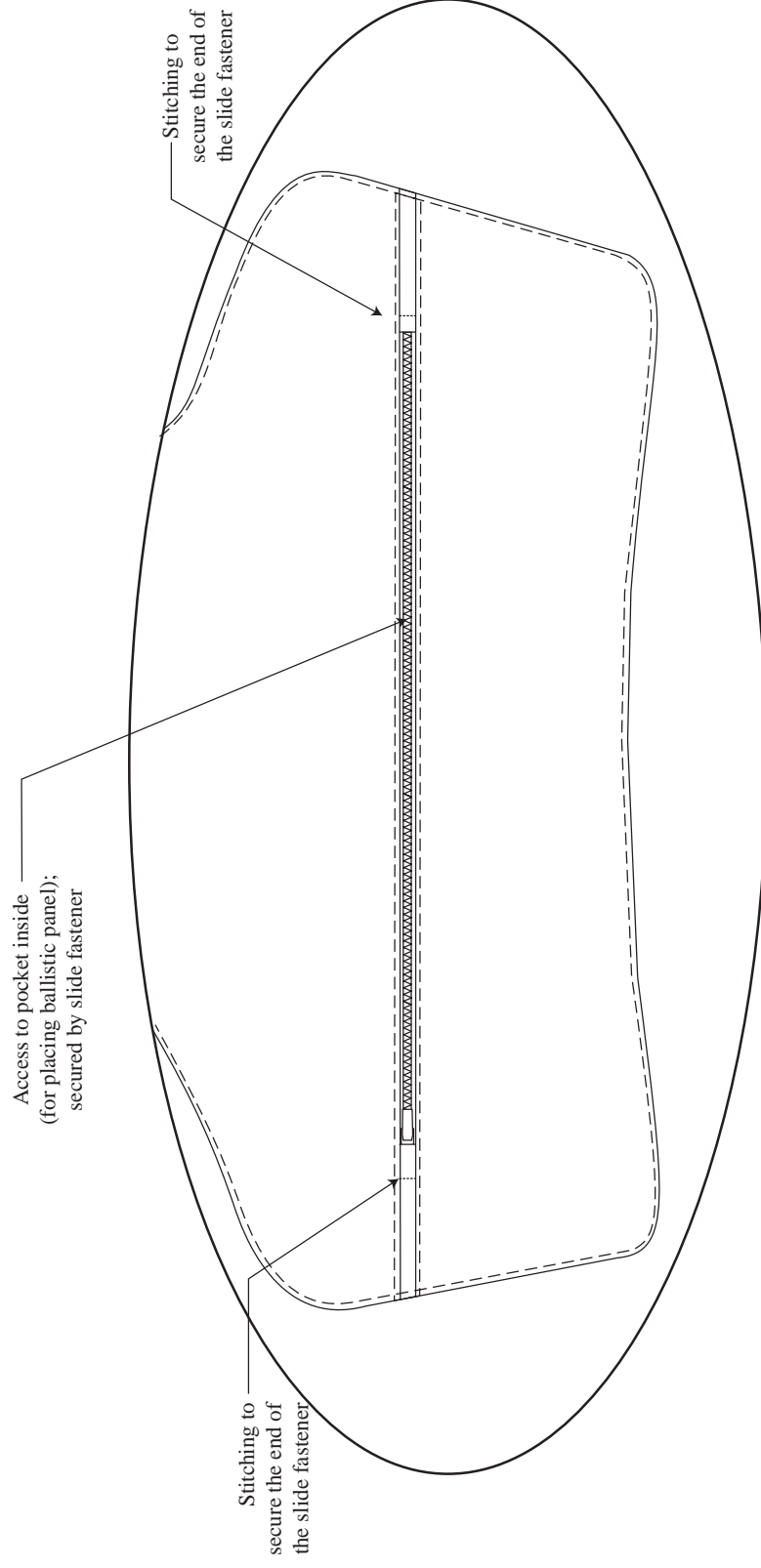
Left Cummerbund Side View

NOT TO SCALE
All measurements are shown in centimeters.
± 0.5 cm tolerance acceptable unless otherwise indicated.

Drawing 10

G.S. 1045-368

Soft Body Armour, Carrier, External, Female Panels
Slide Fastener Opening, Inner Carrier



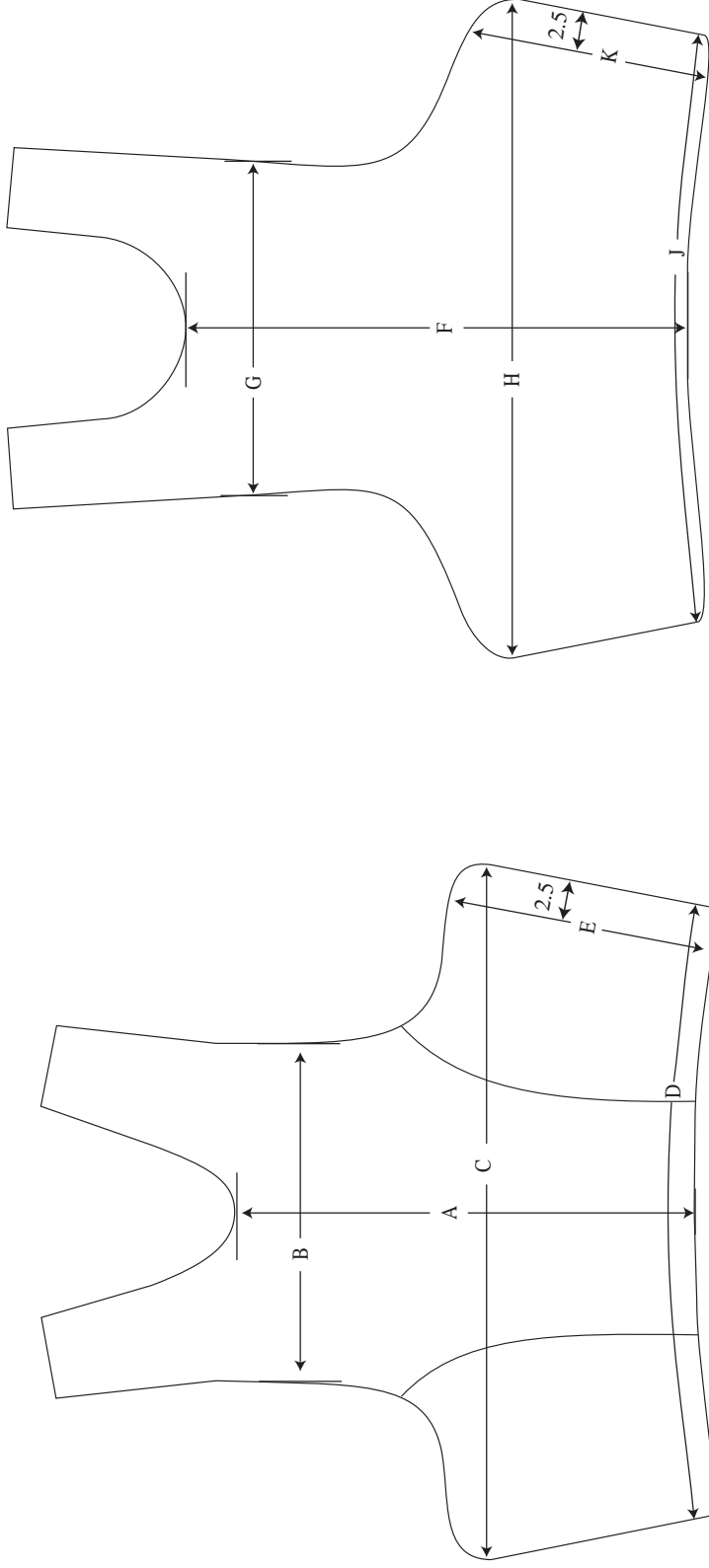
Inner View
(Body Side)

NOT TO SCALE
All measurements are shown in centimeters.
± 0.5 cm tolerance acceptable unless otherwise indicated.

Drawing 11

Soft Body Armour, Carrier, External, Female Panels
Measurement Location

G.S. 1045-368



Front Pouch, body side

Back Pouch, body side

(shown without cummerbund or waist straps)

NOT TO SCALE
All measurements are shown in centimeters.
± 0.5 cm tolerance acceptable unless otherwise indicated.