US ARMY OFFICER SABER, SCABBARD AND COVER

1. SCOPE.

1.1 Scope. This specification covers the requirements for US Army Officer Saber, Scabbard and Cover for the 3rd US Infantry Regiment (The Old Guard).

2. APPLICABLE DOCUMENTS.

2.1 The following documents of the issue in effect on the date of request for proposals, form a part of this specification to the extent specified herein:

STANDARDS:

Federal	
FED. TEST METHOD STD. NO. 151	Metals; Test Methods
Military	
MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes

2.2 Other Publications.

2.2.1 American Society for Testing Materials, Methods for Chemical Analysis of Metals. Application for copies of A.S.T.M. Standards should be addressed to ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959.

3. REQUIREMENTS.

3.1. Sample. Vendor samples are furnished as a guide only. Minor A or B defects (or minor variations from this specification as defined in Table III) may appear in the sample, in which case this specification shall govern. Upon award, the Contracting Officer will issue the vendor a list of defects that must be corrected for preproduction and/or production samples. Except for such variations, the design, appearance, quality and workmanship in all respects not covered by this specification shall be equal to the sample.

3.2 Preproduction sample approval. When required before production is commenced, the contractor shall submit to the contracting officer for approval, a finished Saber, Scabbard and Cover conforming to the requirements for design, construction and workmanship of this specification.

3.2.1 The vendor shall submit test results covering the physical characteristics of each metal and plating as specified in this specification, along with the preproduction sample.

3.3 Materials.

3.3.1 Saber Blade. The blade shall be forged of carbon steel (grade C55) or of X30Cr13 stainless steel, and shall be carefully tempered, hardened and ground to a curved single-edged blade with a “blood” groove extending 21 inches (+/- 0.5 inch) down the blade. The Rockwell “C" hardness shall be from 48 to 54, measured at three points: 4 inches from the

guard, center point of the blade, and 4 inches from the tip. If the blade is forged of carbon steel, the blade shall be nickel plated with a minimum thickness of 0.00059 inches (15 microns). The surface of the blade shall be carefu1ly polished to a bright finish. The blade tongue which holds the guard shall not be hardened.

3.3.1.1 Dimensions. The finished dimensions of Saber blade and hilt shall be in accordance with Table I.

3.3.1.2 Length. The finished blade length and overall length shall be in accordance with Table I.

TABLE I

SABER MEASUREMENTS

CLASS	BLADE LENGTH		OVERALL LENGTH	
1. 28"	28”	(711 mm)	33-3/8"	(848 mm)
2. 29"	29”	(737 mm)	34-3/8"	(873 mm)
3. 30"	30”	(762 mm)	35-3/8"	(899 mm)
4. 31"	31”	(787 mm)	36-3/8"	(924 mm)
5. 32"	32”	(813 mm)	37-3/8"	(949 mm)
6. 33"	33”	(838 mm)	38-3/8"	(975 mm)
7. 34"	34”	(864 mm)	39-3/8"	(1000 mm)

Tolerances are +/- 3/8” (+/- 9 mm)

NOTE: The inside dimension of Scabbard shall be ¼” (6 mm) longer than the blade length.

3.3.1.3 Etch Design. The blade shall be acid etched with the US Army saber design in accordance with commercial practice, and shall have a uniform appearance. Embossing, including letters, shall be raised (solid). All etching, embossing, and art work shall be identical on like parts. The etching shall be not only superficial but tactile. The finished design on the blade shall contain the following aspects:

3.3.1.3.1 Front Side of Left Side (curved guard facing down). The blade's front side shall contain the images of the US Colors and US Army Colors, "US," and scrollwork.

3.3.1.3.2 Spine. The spine shall incorporate scrollwork into its design.

3.3.1.3.3 Reverse Side or Right Side (curved guard facing up). The blade's reverse side shall contain a designated space for personalization, the US Coat of Arms, and crossed cannons over military flags.

3.3.1.3.4 Maker’s Mark and Historical “PROVED” Symbol:. The manufacturer’s Maker’s Mark shall appear on the blade’s ricasso on the reverse side of the blade. The Maker’s Mark shall include the country of origin. The historical six-sided star with the word “PROVED” shall appear on the blade’s ricasso on the front side of the blade.

3.3.1.3.5 Acid Etch Practice. The blade design and ricasso marks shall be acid etched in accordance with commercial practice, and shall l have a uniform appearance and depth across each etch.

3.3.1.4 Balance and Weight. The individual components of the saber shall be designed, cast, and assembled where the balance point for a completed 32-inch saber is located not less than 5.0 inches from where the guard meets the blade. The finished complete saber weights shall be per Table II.

TABLE II

COMPLETE SABER WEIGHTS (WITHOUT SCABBARD)

CLASS	OVERALL WEIGHT
1. 28"	1.38 lbs (624 grams)
2. 29"	1.40 lbs (636 grams)
3. 30"	1.42 lbs (648 grams)
4. 31"	1.45 lbs (660 grams)
5. 32"	1.47 lbs (672 grams)
6. 33"	1.50 lbs (684 grams)
7. 34"	1.52 lbs (696 grams)

Tolerance: +/- 0.1 lbs (+/- 45 grams)

3.3.2 Saber Hilt Assembly. The Saber Hilt assembly shall consist of the following components:

3.3.2.1 End Nut. The end nut shall be an oval design made of a solid copper-zinc alloy casting containing 85% copper (material CuZn15, DIN EN 1652). The entire end nut shall first be copper plated with a minimum thickness of 0.00059 inches (15 microns) and then nickel plated with a minimum thickness of 0.0002 inches (5 microns). The end nut shall be highly polished.

3.3.2.2 Grip Assembly. The grip assembly shall consist of a solid copper-zinc alloy casting containing 85% copper (material CuZn15, DIN EN 1652) and a black acrylonitrile butadiene styrene (ABS) plastic grip. The grip casting shall first be copper plated with a minimum thickness of 0.00059 inches (15 microns) and then nickel plated with a minimum thickness of 0.0002 inches (5 microns). The grip casting shall be highly polished.

3.3.2.3 Guard. The guard shall consist of a solid copper-zinc alloy casting containing 85% copper (material CuZn15, DIN EN 1652). The guard shall first be copper plated with a minimum thickness of 0.00059 inches (15 microns) and then nickel plated with a minimum thickness of 0.0002 inches (5 microns). The guard shall have a rounded or curved design and be highly polished.

3.3.2.4 Assembly. All component parts shall be accurately machined for size and fit to

assure a solid and proper assembly. The finished mounting shall be clean, smooth and free from dents and other markings that may affect the appearance. All components shall be designed and assembled in a manner that allows the user to perform manual of arms with the saber.

3.3.3 Scabbard. The Scabbard shall consist of the following components:

3.3.3.1 Scabbard Body. The scabbard body shall be made from 1mm (0.04 inch) thick carbon steel Material AISI 1008. The scabbard body shall first be copper plated with a minimum thickness of 0.0012 inches (30 microns) and then nickel plated with a minimum thickness of 0.00059 inches (15 microns). The scabbard body shall be highly polished.

3.3.3.2 Shoe. The shoe shall be made from 2mm (0.08 inch) thick carbon steel Material AISI 1045 and shall first be copper plated with a minimum thickness of 0.0012 inches (30 microns) and then nickel plated with a minimum thickness of 0.00059 inches (15 microns). The shoe shall be carefully polished and silver-soldered to the scabbard body prior to plating.

3.3.3.3 Scabbard Rings. The rings shall be made of stainless steel material SS304 and nickel plated with a minimum thickness of 0.00059 inches (15 microns). The rings shall have an outside circumference of 1-1/8" (+/- 1/16").

3.3.3.4 Scabbard Ring Bands. The ring bands shall be made of a copper-zinc alloy containing 60-65% copper. The ring bands shall first be copper plated with a minimum thickness of 0.0012 inches (30 microns) and then nickel plated with a minimum thickness of 0.00059 inches (15 microns). The bands shall be silver-soldered to the scabbard body prior to plating.

3.3.3.5 Liner. The conical-shaped liners inside the scabbard body shall be made from 1 mm (0.04) thick brown cellulose-sheet, according to EN 60641. The liners shall extend the total inside length of the scabbard body. One liner shall have a foam (ISO 845, 22 g/m^3) reinforcement in the center to give better hold to the saber when entered into the scabbard. The foam shall be 0.4 inch thick and 7 inch (+/- .5 inch) long. The liners shall fit the inside of the scabbard body without being loose.

3.3.3.6 Mouthpiece. The mouthpiece shall be made of a solid copper-zinc alloy casting containing 85 % copper (CuZn27). The mouthpiece shall first be copper plated with a minimum thickness of 0.0012 inches (30 microns) and then nickel plated with a minimum thickness of 0.00059 inches (15 microns). The mouthpiece shall be highly polished and shall be affixed to the scabbard body with a screw.

3.3.3.7 The finished scabbard shall be clean, smooth and free from pits, dents and any other imperfection that may affect the appearance.

3.3.4 Plating. All copper plating shall be a minimum of 0.00059 inches (15 microns). All nickel plating shall be a minimum of 0.00059 inches (15 microns) in thickness.

3.3.5 Felt Cushion. Each sword shall have a washer cushion made of white felt 0.1 inches (2-3 mm thick) with a density of 0.2 – 0.4 g/m^3. The washer shall act as a cushion between the base of the guard and the mouthpiece of the scabbard.

3.3.6 Cover. Each saber and scabbard shall be provided with a dark blue

polyester/cotton cloth cover to fit the assembled saber and scabbard. The cover shall have a drawstring.

3.3.6.1 The cover shall be vat dyed dark blue color. The fabric shall be free from any imperfections that may affect the appearance or serviceability of the cover. The fabric shall have the following physical characteristics:

a. Content: 80% polyester, 20% cotton
b. Weight: No less than 4.5 ounces per yard (60-inch goods)
c. Texture: At least 45 yarns in the warp and 45 yarns in the filling

3.4 Workmanship. The quality of manufacture shall be controlled to guarantee conformity with the standard of workmanship established in this specification. The finished saber, scabbard and cover shall be clean and free from any defects that may affect appearance or serviceability.

3.4.1 Construction. The construction of components and assemblies of the items covered herein shall conform to the requirements of this specification. Components shall be free from split, puncture, malformation or fracture.

3.4.2 Soldering. Soldering shall be complete, sound, uniform and free from burn through areas, pits, slag inclusions, porosity, cracks, fractures, flash and excess flux deposits.

3.5.3 Removal of burrs, sharp edges, and flash lines. All burrs, sharp edges, and flash lines shall be removed prior to plating and polishing.

4. QUALITY ASSURANCE PROVISIONS.

4.1 Supplier's Responsibility. The supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own or any other inspection facilities and services acceptable to the Government. Inspection records of the examination and tests shall be kept complete and made available to the Government as specified in the contract or order. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 Inspection for Purposes other than Acceptance.

4.2.1 Preproduction Sample. When required, the preproduction sample shall be inspected for compliance to design, construction, workmanship and appearance.

4.3 Inspection for Acceptance. Unless otherwise indicated hereinafter, inspection shall be in accordance with MIL-STD-105. Inspection level will be Level III. Acceptable quality levels will be 2.5 DHU for majors, 15.0 DHU for majors and minor A's combined, and 40.0 DHU for totals for defects listed in Table III. Defects with an asterisk (*) in classification column will be classified as a major defect when affecting appearance or serviceability seriously; as a minor A defect when affecting appearance or serviceability, but not seriously.

4.3.1 Sampling for Testing. The sample unit for testing of each component shall be the quantity necessary to perform all required tests one time each.

4.3.2 Examination of the End Item. The contractor shall inspect the finished sabers for compliance with this specification prior to submitting them to the United States Government for final inspection and acceptance.

4.3.3 Final Inspection. The passing as satisfactory of the preproduction sample or any detail of construction or material shall not be construed as relieving the contractor of responsibility for faulty workmanship or material which may be discovered at any time prior to final acceptance.

4.3.3.1 The point of final inspection and acceptance of the finished articles shall be as specified in the contract or order.

4.4 Tests. All tests shall be conducted in accordance with the test methods specified herein.

4.5 Defects.

TABLE III CLASSIFICATION

Blade		MAJOR	MINOR A	MINOR B
	Bent or distorted and not fitting the scabbard correctly.	X		
	Edge nicked affecting appearance.	X		
	Edge not uniform in thickness.		X	
	Blade length which is more than 3/8 inch shorter or longer than the specified class length.		X	
	Not polished to bright finish.		X	
	Blemishes.			X
Design on blade				
	Design not clear.	X		
	Design with blemishes.		X	
	Design not imposed properly		X	
	Design and ricasso marks not uniform in depth and appearance.			X
Felt cushion			X	
	Omitted.	X		
	Not the proper size.			X
Saber Hilt Assembly				
	Grip and guard not assembled properly.	X		
	Incorrect shape and clearness of design.		X	
	Not properly finished.		X	
Grip Assembly				
	Incorrect shape and clearness.		X	
	Not properly polished.			X
Guard				

	Incorrect shape.	X		
	Clearness of design is poor.		X	
	Not properly plated exposing copper.		X	
Scabbard				
	Incorrect shape and clearness of design.	X		
	Dents.		X	
	Blemishes.		X	
	Not plated properly.	X		
	Incorrect size and failure to allow insertion of saber freely and securely.	X		
	Too tight to insert saber properly or withdraw properly.	X		
	The scabbard has incorrect liner.		X	
	Scabbard liner does not have foam reinforcement.		X	
Shoe Fitting				
	Silver-soldered joint not uniform in appearance.		X	
	Not plated properly.	X		
Rings				
	Not plated properly.	X		
Ring Bands				
	Silver-soldered joint not uniform in appearance.		X	
	Not plated properly.	X		
Mouthpiece				
	Not plated properly.	X		
General				
	Finish not clear, containing scars and blemishes and not properly polished.		X	
Cloth Cover				
	Any seam or stitch type operation omitted.	X		
	Improper seams or stitching resulting in badly twisted, pleated or bulging seams on outside of cover.	X		
	Thread breaks or ends of joining seams (when not caught in other seams) not securely backstitched.			X
	Multiple skipped stitches, loose or tight stitch tension resulting in an unsatisfactory seam.	X		
	On outside, any open seam. Note: One or more broken or 2 or more continuous skipped or run off stitches constitute an open seam.	X		

	Any raw edge on outside.		X	
Component and Assembly				
	Any component part omitted.	X		
	Any defects of component or assembly, definitely affecting serviceability.	*		
	Any defect of component or assembly affecting appearance of limiting serviceability (Unless otherwise classified herein).	*		

5. PREPARATION FOR DELIVERY:

5.1 Packaging. Each saber and scabbard shall be put into a cloth cover and then packaged by inserting each one snugly in a box or in a spiral or convolute wound tube.

5.2 Packing. Unless otherwise specified in procurement documents, sabers shall be packed in a manner which will insure acceptance and safe delivery at destination. As far as practicable, supplies of one type and class only shall be packed in containers which (together with packaging, wrapping and inner packing) conform to carrier rules and regulations as applicable to the mode of transportation selected.

6. NOTES.

6.1 Patent Notice. When Government drawings, specifications and other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.