ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 4 PAGES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: 09/30/2006
2. CONTRACT NO. (if any): GS-07F-8897D
3. ORDER NO.: HSBP1006F13487
4. REQUISITION/REFERENCE NO.: 0020023706

5. ISSUING OFFICE (Address correspondence to):
Department of Homeland Security
Customs & Border Protection
1300 Pennsylvania Ave, NW
NP 1310
Washington DC 20229

6. SHIP TO:
a. NAME OF CONSIGNEE
See Attached Delivery Schedule
b. STREET ADDRESS
c. CITY | d. STATE | e. ZIP CODE
f. SHIP VIA

7. TO:
a. NAME OF CONTRACTOR
AMERICAN SCIENCE & ENGINEERING INC
b. COMPANY NAME
c. STREET ADDRESS
829 MIDDLESEX TPKE
d. CITY: BILLERICA | e. STATE: MA | f. ZIP CODE: 01821

8. TYPE OF ORDER
☐ a. PURCHASE - Reference Your _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.
☒ b. DELIVERY - Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA

10. REQUISITIONING OFFICE
(b) (6)

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
☒ a. SMALL ☐ b. OTHER THAN SMALL
☐ c. DISADVANTAGED ☐ d. WOMEN-OWNED
☐ e. HUBZone ☐ f. EMERGING SMALL BUSINESS
☐ g. SERVICE-DISABLED VETERAN-OWNED

CONTRACTOR TIN: (b) (3); (b) (4)

12. F.O.B. POINT: Destination

13. PLACE OF: a. INSPECTION | b. ACCEPTANCE
14. GOVERNMENT B/L NO.
15. DELIVER TO F.O.B POINT ON OR BEFORE (Date): 05/16/2007
16. DISCOUNT TERMS

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QTY Accpt (g)
00010	INA ZBV X-Ray Inspection System	1.00	EA	(b) (4)		
00020	INA Hot Environment	1.00	EA			
00030	INA Stationary Scan Mode	1.00	EA			
00040	INA Radioactive Threat Detection	1.00	EA			
00050	INA One Year Labor Warranty	1.00	EA			
00060	INA 2nd Year Parts/Labor Service	1.00	EA			
00070	INA Ocean/Inland Freight	1.00	EA			
00080	ZBV Backscatter - Lg. Scale Im. System	1.00	EA			

18. SHIPPING POINT
19. GROSS SHIPPING WEIGHT
20. INVOICE NO.

17(h) TOT. (Cont. pages): (b) (4)

SEE BILLING INSTRUCTIONS ON REVERSE

21. MAIL INVOICE TO:
a. NAME: DHS - Customs & Border Protection National Finance Center
b. STREET ADDRESS (or P.O. Box): P.O. Box 68908
c. CITY | d. STATE: IN | e. ZIP CODE: 46268

17(i) GRAND TOTAL: $4,167,961.00

22. UNITED S
BY (Signatu (b) (6)
AUTHORIZE

23. NAME (Typed): Terence Lew
TITLE: CONTRACTING/ORDERING OFFICER

Previous edition not usable

OPTIONAL FORM 347 (REV. 3/2005)
Prescribed by GSA/FAR 48 CFR 53.213 (e)

Federal Tax Exempt ID: 72-0408780

NOTES:

Delivery Order Item Funding:

Order item numbers 00010 through 00070 list and fund the components and services for the Z Backscatter Van to be delivered to Ankara, Turkey. This unit is to be accepted at the contractor's factory (FOB origin) but shipped to its destination by the contractor. CLIN 0070 provides funding in the amount of (b) (4) for shipment by the contractor to Turkey.

The total amount for equipment and services for the unit going to Turkey is (b) (4)

Order item numbers 00080 through 00170 fund all equipment and services for the five Z Backscatter Vans for delivery to domestic locations.

Items numbers 00080 through 00140 fund the five vans and components based on the following unit prices:

- Five Z Backscatter Vans @ (b) (4)
- Five Hot Environment Systems @ (b) (4)
- Five Radioactive Threat Detection Systems @ (b) (4)

Domestic Hardware/Van systems funding totals (b) (4)

Order item numbers 00150 through 00170 fund the following services for the domestic units:

- Training in accordance with CBP's Statement of Work @ (b) (4)
- Freight for FOB destination shipment of all five units totaling (b) (4)

Shiping cost

The contactor's GSA FSS contract offers FOB origin pricing. The CBP has requested FOB destination shipments for domestic units, therefore, the order includes frieght charges.

Payment:

For the domestic units: 80% of equipment prices will be payable on successful completion of the Government Acceptance Testing in Billerica, MA. The 20% balance will be payable on satisfactory completion of individual Site Acceptance Testing at final CBP destinations. For the foreign unit, 100% of the equipment price will be due on successful completion of the Government Acceptance Test, FOB origin, Billerica, MA.

Attachments

ORDER FOR SUPPLIES OR SERVICES
Schedule - Continuation

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER	2. CONTRACT NO. (if any)	3. ORDER NO.
09/30/2006	GS-07F-8897D	HSBP1006F13487

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QTY Accpt (g)
00090	ZBV Backscatter - Lg. Scale Im. System	1.00	EA	(b) (4)		
00100	ZBV Backscatter - Lg. Scale Im. System	1.00	EA			
00110	ZBV Backscatter - Lg. Scale NII Mobile	1.00	EA			
00120	Large Scale NII Imaging System	1.00	EA			
00130	Equipment Add-Ons	5.00	EA			
00140	Equipment Add-Ons	5.00	EA			
00150	Other Services	1.00	AU			
00160	Other Services	1.00	AU			
00170	Other Services	1.00	AU			

HP Officejet 7310
Personal Printer/Fax/Copier/Scanner

Log for
OSI
2023937565
Sep 30 2006 9:16PM

Last Transaction

Date	Time	Type	Identification	Duration	Pages	Result
Sep 30	9:14PM	Fax Sent	19782628812	1:44	4	OK

ITEMS AND PRICES, DELIVERY SCHEDULE AND ACCOUNTING DATA
FOR
DELIVERY ORDER: HSBP1006F13487

SCHEDULE OF SUPPLIES/SERVICES

Item Number:	00010	Line Item (Priced/Information/Option): P		
Supplies/Services:	INA ZBV X-Ray Inspection System			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00020	Line Item (Priced/Information/Option): P		
Supplies/Services:	INA Hot Environment (Open Market Item)			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00030	Line Item (Priced/Information/Option): P		
Supplies/Services:	INA Stationary Scan Mode (Open Market)			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00040	Line Item (Priced/Information/Option): P		
Supplies/Services:	INA Radioactive Threat Detection (Open Market)			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00050	Line Item (Priced/Information/Option): P		
Supplies/Services:	INA One Year Labor Warranty (Open Market)			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00060	Line Item (Priced/Information/Option): P		
Supplies/Services:	INA 2nd Year Parts/Labor Service (Open Market)			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00070	Line Item (Priced/Information/Option): P		
Supplies/Services:	INA Ocean/Inland Freight			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00080	Line Item (Priced/Information/Option): P		
Supplies/Services:	ZBV Backscatter - Lg. Scale Im. System			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00090	Line Item (Priced/Information/Option): P		
Supplies/Services:	ZBV Backscatter - Lg. Scale Im. System			
	Qty	Unit	Unit Price	Ext. Price

	1	EA	(b) (4)	(b) (4)

Item Number: 00100 Line Item (Priced/Information/Option): P
Supplies/Services: ZBV Backscatter - Lg. Scale Im. System

Qty	Unit	Unit Price	Ext. Price
1	EA	(b) (4)	(b) (4)

Item Number: 00110 Line Item (Priced/Information/Option): P
Supplies/Services: ZBV Backscatter - Lg. Scale NII Mobile

Qty	Unit	Unit Price	Ext. Price
1	EA	(b) (4)	(b) (4)

Item Number: 00120 Line Item (Priced/Information/Option): P
Supplies/Services: Large Scale NII Imaging System

Qty	Unit	Unit Price	Ext. Price
1	EA	(b) (4)	(b) (4)

Item Number: 00130 Line Item (Priced/Information/Option): P
Supplies/Services: Equipment Add-Ons

Qty	Unit	Unit Price	Ext. Price
5	EA	(b) (4)	(b) (4)

Item Number: 00140 Line Item (Priced/Information/Option): P
Supplies/Services: Equipment Add-Ons

Qty	Unit	Unit Price	Ext. Price
5	EA	(b) (4)	(b) (4)

Item Number: 00150 Line Item (Priced/Information/Option): P
Supplies/Services: Other Services

Qty	Unit	Unit Price	Ext. Price
1	AU	(b) (4)	(b) (4)

Item Number: 00160 Line Item (Priced/Information/Option): P
Supplies/Services: Other Services

Qty	Unit	Unit Price	Ext. Price
1	AU	(b) (4)	(b) (4)

Item Number: 00170 Line Item (Priced/Information/Option): P
Supplies/Services: Other Services

Qty	Unit	Unit Price	Ext. Price
1	AU	(b) (4)	(b) (4)

Total Funded Contract Value: $4,167,961.00

CBP Order and Contractor Quotation Map:

This order's funding comes from two CBP organizations and different accounts. The following information maps order item numbers to the contractors' final quotation:

Order Items and Descriptions:

Foreign Unit

00010 through 00070: one Z backscatter van for CBP International Affairs (INA), delivery to Turkey consisting of:

#00010 Z Backscatter Van @
#00020 Hot Environment System @
#00030 Stationary Scan Mode System @
#00040 Radioactive Threat Detection System @
#00050 One Year Warranty @
#00060 Second year warranty @
#00070 Freight to Turkey @

(b) (4)

Order Total for Foreign Unit

Domestic units:

00090 - 00170 Five Z Backscatter Vans and services consisting of

Domestic equipment only funding item numbers:

#00080 - 00140:

#00080 Z Backscatter Van 1 ea
#00090 Z Backscatter Van 1 ea
#00100 Z Backscatter Van 1 ea
#00110 Z Backscatter Van 1 ea
#00120 Z Backscatter Van 1 ea
#00130 Z Backscatter Van 1 ea
#00140 Equipment Add-Ons @
#00150 Equipment Add-Ons @
Order Total

(b) (4)

AS&E Domestic Items Quote:

Z Backscatter Van @ (b) (4)
Hot Environment Systems @ (b) (4)
Radioactive Threat Detection Systems @ (b) (4)
Domestic System Quote Hardware Subtotal = (b) (4)

Domestic Order Item Services:

#00150 Other Services
#00160 Other Services
#00170 Other Services
OrderTotal

(b) (4)

« Other Services » is Comprised of AS&E's Domestic Quotes for the Following :

Training (b) (4)
Freight
San Yisidro, CA
Faben, TX
Otay Mesa. CA
Laredo, TX
Presidio, TX

(b) (4)

Sub total	(b) (4)	[redacted]
Quote Total:		(b) (4)

CBP Order Total: $4,167,960.00

AS&E Quote Total: (b) (4)

ACCOUNTING AND APPROPRIATION INFORMATION

Item: 00010 6100.31FGGLCS0900800000ZIAC051R0AP04 9417531FG
Amount (b) (4)

Item: 00020 6100.31FGGLCS0900800000ZIAC051R0AP04 9417531FG
Amount (b) (4)

Item: 00030 6100.31FGGLCS0900800000ZIAC051R0AP04 9417531FG
Amount (b) (4)

Item: 00040 6100.31FGGLCS0900800000ZIAC051R0AP04 9417531FG
Amount (b) (4)

Item: 00050 6100.2525GLCS0900800000ZIAC051R0AP04 941752525
Amount (b) (4)

Item: 00060 6100.2525GLCS0900800000ZIAC051R0AP04 941752525
Amount (b) (4)

Item: 00070 6100.2525GLCS0900800000ZIAC051R0AP04 941752525
Amount (b) (4)

Item: 00080 1750.3192USCSGLCS0923080000Z00006400AP06 IS7563192
Amount (b) (4)

Item: 00090 1750.3192USCSGLCS0923080000Z00006400AP06 IS7563192
Amount (b) (4)

Item: 00100 1750.3192USCSGLCS0923080000Z00006400AP06 IS7563192
Amount (b) (4)

Item: 00110 1750.3192USCSGLCS0923080000Z00006400AP01 IS7563192
Amount (b) (4)

Item: 00120 1750.3192USCSGLCS0923080000Z00006400AP01 IS7563192
Amount (b) (4)

Item: 00130 6100.319BUSCSGLCS0901720000Z00002180IC18 IS760319B
Amount (b) (4)

Item: 00140 6100.319BUSCSGLCS0901720000Z00004131IC18 IS756319B
Amount (b) (4)

Item: 00150 6100.2525USCSGLCS0901720000Z00006400AP06 IS7562525
Amount (b) (4)

Item: 00160 6100.2525USCSGLCS0923080000Z00006400AP01 IS7562525
Amount (b) (4)

Item: 00170 6100.2525USCSGLCS0923080000Z00006400HQ01 IS7562525
Amount (b) (4)

DELIVERY SCHEDULE

Deliver To:

Customs and Border Protection
Attn: (b) (6) [redacted] NP
1300 Pennsylvania Avenue N W
Ronald Reagan Federal Building
Washington DC 20229

Instructions:

Item	Quantity	Delivery Date	All Locations: IAW SOW
00010	1	(b) (4) [redacted]	
00020	1		
00030	1		
00040	1		
00050	1		
00060	1		
00070	1		
00130	5		
00140	5		
00170	1		
00080	1		
00090	1		

00100	1	(b) (4) [redacted]
00110	1	
00120	1	
00150	1	
00160	1	

HSBP1006F13487 Attachment

September 8, 2006

U.S. Customs and Border Prtection
Request for Quote

Z Backscatter Van Purchase Description

In accordance with GSA Federal Supply Schedule Contract GS-07F-8897D, the U. S. Customs and Border protection (CBP) requests AS&E's Most Favored Customer, best pricing for six each Z Backscatter Vans (ZBV) and training as indicated below:

1. CBP Port of Entry Destinations and Delivery Dates

Destinations	Quantity	Delivery date
Domestic:		
1. San Ysidro, CA	1 Each	(b) (4)
2. Faben, TX	1 Ea	
3. Otay Mesa, CA	1 Ea	
4. Laredo, J/L, TX	1 Ea	
5. Presidio, TX	1 Ea	
Foreign:		
6. Ankara, Turkey	1 Ea	

2. Warranty:

Domestic Units:
Price includes one-year Standard Warranty for domestic units 1 –5, i.e., all parts and labor warranty, plus scheduled Preventative Maintenance, from date of on-site acceptance. On expiration of the Standard Warranty, maintenance support will be provided under separate CBP contract.

Foreign Unit:
Two-year full bumper-to-bumper coverage of parts and labor, including field service engineer travel.

3. System Configurations:

Domestic Units:
All domestic systems shall consist of the standard ZBV configurations with no optional components. Pricing is to include shipping to destinations.

Foreign Unit:
The configuration of the foreign unit shall be as itemized below. The contractor shall quote component prices individually:

- ZBV Van
- Harsh Environment operations: hot and cold from 20F to 122F
- Stationary Scan Mode – console and personal scanning (including shore power)
- Radioactive Threat Detection – gamma detection & neutron detection
- Two-year full service warranty, as indicated above
- Shipping to destination; Ankara, Turkey

4. Training:

Domestic:
Firm-fixed priced services in accordance with the attached ZBV Operator Statement of Work.

Foreign: Operator Training for the foreign unit shall be provided by the CBP. The contractor shall reduce its price (which includes this training) quote by the price of the training accordingly.

5. Shipping

Domestic:
The contractor shall be responsible for FOB destination shipment for all domestic units.

Foreign:
The contractor shall be responsible for shipment and import dues, if any, for shipment of the unit to Ankara, Turkey

5. CBP Acceptance:

The contractor shall be responsible for the preparation of, and submission to CBP for approval, an Acceptance Test Plan (ATP). The contractor shall perform the tests necessary to ensure that NII system components are operating as specified in the ATP. The vendor shall utilize applicable ASTM standards, i.e. , ASTM E 592-99, ASTM E 747-97, ASTM E 1025-98, and ASTM F 792-01, for evaluation and testing of image and system performance requirements. CBP officials, or their representatives, shall witness the contractor's Factory Acceptance Test (FAT) for the first unit only.

Designated CBP personnel or their representatives shall perform a Government Factory Test (FT) for each unit, and sign applicable documentation. The NII system shall pass all test elements of the ATP prior to acceptance by CBP.

The vendor shall prepare and submit all materials necessary for FDA review in accordance with regulations and apply for waivers as necessary. The FDA submission and any exception to this certification must be clearly identified and copied to the CBP COTR.

Factory Acceptance testing shall be conducted for each system by CBP in accordance with a CBP developed Factory Acceptance Test Plan. This test will consist of three major items; inventory and physical inspection, integrated system performance, and a radiological survey.

A Site Acceptance Test (SAT) will be performed at each CBP designated destination to verify the results of the Factory Test, minus the performance tests.

The foreign unit will be accepted after completion of the Government Factory Test.

Attachment: ZBV Operator Training Statement of Work

STATEMENT OF WORK

FOR

U.S. CUSTOMS AND BORDER PROTECTION

AMERICAN SCIENCE AND ENGINEERING ZBV OPERATOR TRAINING

9/7/06

Prepared by
U.S. Customs and Border Protection

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1.0 SCOPE

1.1 Background

The Customs and Border Protection's (CBP) Office of Field Operations (OFO) has requested that CBP Officers be trained in system operation and image interpretation (including an emphasis on recognizing weapons of mass effect [WME]) on the Z Backscatter Van (ZBV) produced by American Science and Engineering, Inc. (AS&E).

1.2 Purpose

This Statement of Work (SOW) specifies the requirements for the development of training materials and delivery of training services to satisfy training requirements for the training of CBP Officers on the ZBV. These materials are to be developed and delivered according to CBP training standards, following the Instructional Systems Design methodology.

2.0 GOVERNMENT FURNISHED INFORMATION

Listed information may be used to satisfy the requirements of this SOW. All Government Furnished Information (GFI) remains the property of the Government and may not be used by AS&E for purposes other than meeting the requirement stated herein.

For this course CBP shall supply:

1. Relevant CBP Policy and Procedures (including CBP Training Standards)
2. Templates/models for Instructor Guide, for Student Manual, for Personal Qualification Standard, for PowerPoint presentations, and for job aids.
3. Lessons on NEEMR/ETC, OFO Core Messages, Radiation Safety
4. Rosters
5. Upfront materials required by the Office of Training and Development (OTD), including but not limited to course code, race/ethnicity statement, core values, mission statement
6. Standard evaluation forms and process
7. Any other CBP-specific information

3.0 REQUIREMENTS

AS&E shall provide the training and all training equipment, supplies, and materials necessary to fulfill this SOW.

Products developed under prior contract shall be used to the maximum extent possible. All NII images, all Government Furnished Information (GFI), and other CBP-specific materials remain the property of CBP and may not be used by AS&E for any purpose other than CBP training.

Where noticeable differences among ZBV systems in the field exist, the training shall make reference to them and point out any implications (if any) for proper operation or image interpretation.

3.1 Kick-off Meeting

CBP will host an initial one-day meeting between its personnel and AS&E to review expectations and requirements.

3.2 Task Analysis

Prior to the development of the training, CBP requires that AS&E, or designated training developer, conduct a task analysis (with assistance from OTD to coordinate with OFO). The purpose of the task analysis is to determine the content specific to CBP Officers, length, best method to train, number of instructors.

The task analysis will be coordinated through OTD. OTD will assist AS&E in determining timing, selecting Officers, guiding the task analysis process (OTD will work with OFO to ensure this does not impact operations).

It is expected that this process will take two days at a CBP port using a ZBV involving certified ZBV operators from CBP. As a result of this task analysis and any other research agreed upon by AS&E and CBP, a design plan will be produced by AS&E.

3.3 Design Plan

As a result of the task analysis AS&E will develop a design plan. This shall include at a minimum: background, project description, course map (overview of the training topics and estimated timing and delivery method), target audience, course structure and outline (scope and sequence of subjects), performance (terminal and enabling) objectives and images required for the development of the training.

CBP will review the design plan and comment. A final design plan will be used as the guide for developing and delivering the training materials.

3.4 Image Collection

The design plan will designate the images and other information required to develop training. AS&E will determine the inventory of appropriate ZBV images available for training. These images must have manifest information and a clear designation of if there is an anomaly, if so where, and if possible what the anomaly is. Any seizure images used will have to be from closed cases. All images used must include as much

documentation as possible, manifest, where anomaly located, what anomaly was, how identified, etc.

WME threat images will also need to be included in the training.

Any image collection will be conducted by AS&E with the coordination and approval of CBP.

3.5 Training Structure

Based on the lessons learned from previous training development and delivery for non-intrusive inspection (NII) technology, CBP provides the following structure for the ZBV training. This is guidance and the final training should be based on the task analysis and approved design plan.

The training should combine classroom presentation, hands-on demonstrations using computers in the classroom and the ZBV in the field, practical activities using classroom computers and the ZBV in the field.

AS&E should determine class size and instructor ratio, based on the task analysis and design plan.

In order to accommodate the requirements for classroom and hands-on training, the following is an example of rotating students to the truck and classroom. This is based on 2 instructors and 6 students.

Example – class size of 6 – 2 Instructors

	Day One	Day Two	Day Three	Day Four
Morning	Radiation Safety (CBP 4 hours) Classroom (6 students)	Classroom (6 students) System Demonstration (6 students)	Image exercises (3 students) Hands-on at ZBV (3 students)	Image exercises (3 students) Hands-on at ZBV (3 students)
Lunch				
Afternoon	Classroom (6 students) System Demonstration (6 students)	Image exercises (3 students) Hands-on at ZBV (3 students)	Image exercises (3 students) Hands-on at ZBV (3 students)	Image exercises (3 students) Hands-on at ZBV (3 students)

Please note the above is just an example. Not a set schedule for the ZBV

This model requires computers for exercises and a library of CBP images for in-classroom image analysis. This method for delivery is recommended to ensure that participants receive adequate training on image analysis.

Radiation safety is a pre-requisite for large-scale NII equipment. This course is 4 hours and delivered by CBP instructors. Depending on timing this course can be delivered the day prior to the start of training.

3.6 Course Content

The following course outline is an example of course topics. **Bolded** items will be provided by CBP.

I. Introduction
II. **NEEMR/ETC**
III. **Core Messages (presentation to be video)**
IV. **Radiation Safety (4 hour course)**
V. X-ray Theory and Principles of Operation specific to the ZBV
VI. System Components (Components and Detailed Functions)
VII. Required Operators, roles and functions
VIII. System Operation
- Operation Overview (including requisites for a good scan)
- Crew Responsibilities
- Operational Safety
- Startup (Pre-Op Check, Starting Generator, Operator's Console, HVAC, Auxiliary Systems, etc.)
- Scanning Process (Stationary and Driving)
- Shutdown

IX. Image Analysis
- Computer Menus and Functions
- Image analysis and interpretation introduction and practical exercises in classroom and at truck
- Analysis Techniques
- Image Archiving and Retrieval
- WME Awareness and image analysis

X. Problem Resolution (Low Level Troubleshooting)
XI. Preventive Maintenance
XII. Demonstrations and Hands On Activities
- Component Location/Safety (at van)
- Startup and Shut down (at van)
- Demonstration of Inspection Process (at van)
- Demonstration of Image Analysis (in classroom)
- Demonstration of Manual Archive (in classroom)

3.7 Required Courseware

AS&E shall develop ZBV certification training courseware in accordance with the task analysis and CBP approved design plan.

The required courseware includes:

- Audiovisual Presentation
- Instructor Guide
- Student Manual
- Job Aids
- Training Aids
- Image Interpretation Software
- Images
  - Seizure
  - Non-seizure
  - WME
- Personal Qualification Standard
- Laptops with images and software loaded for image exercises

These are described in detail in the remainder of this section. Products developed under prior contract with the U.S. Customs and Border Protection (and its predecessors) shall be used to the maximum extent possible.

Any deliverables developed under this contract shall conform to the requirements of the Office of Training and Development.

AS&E will retain and update master reproducible materials for all components until the contract has ended, at which time they will be transferred to the Government, which will then have total control over all said materials.

The PowerPoint Presentation, Instructor Guide and Student Manual shall be divided into modules, referred to as lessons. The three elements of courseware shall coordinate with one another.

3.7.1 Presentations

AS&E shall develop and provide an audiovisual presentation in MS PowerPoint 2000® or other CBP compatible product. It will be divided into lessons, according to the course outline.

The file for each lesson shall be entitled in the following manner:

Item	Example
Course name	ZBV
Lesson number (Lxx)	L09
Lesson's abbreviated name	Components
Date of most recent version (year-month-day)	2006-07-25

Example file name/title: ZBV L09 Components 2006-07-25.ppt

This indicates that the file relates to Lesson number nine of the training on the ZBV van, concerns the components of the van, and was most recently updated on July 25th, 2006. It is a PowerPoint presentation as identified by the filename extension.

A model PowerPoint presentation is included as an attachment.

3.7.2 Instructor Guide

Develop and provide an Instructor Guide (IG) for ZBV Initial Training and Practical Training that contains the detailed technical data and information to be imparted by the Instructor to the students.

The IG shall conform to the model provided by CBP, including that it be written in Microsoft Office product software.

The IG shall be organized according to lessons. Each lesson shall contain the following:

- Front sheet identifying: the purpose of the lesson, expected duration, requisite environmental conditions (if any), terminal and enabling objectives, required equipment, and any training aids and/or audiovisual aids to have on hand
- Sequence of instructional activities, laying out in detail the actions the instructor is to take, including: the presentation slides and what should be said about each, points where questions should be asked, where discussions should be led, what training/job aids to be used at what point and in what manner, and where exercises are to be conducted
- Identification of points where the Instructor should ask questions to check understanding

- Identification of points where the Instructor should lead a discussion to focus students' attention on important issues or to integrate information just presented
- All diagrams, text material, posters, audiovisual aids and any other materials to be used in the presentation shall be identified adjacent to each point where they are to be utilized, for each time their use is required
- Readable thumbnail image of each PowerPoint slide in the presentation shown to students
- Detailed instructors for demonstrations and exercises in the classroom and at the ZBV
- Lesson summary

Where images are to be analyzed, the IG shall clearly identify any anomalies and mark them clearly on the instructor's version of the image.

The file for each IG segment shall be entitled in the following manner:

Item	Example
Course name	ZBV
Document Type	IG
Lesson number (Lxx)	L09
Lesson's abbreviated name	Components
Date of most recent version (year-month-day)	2006-07-25

Example file name/title: ZBV IG L09 Components 2006-07-25.doc

This indicates that the file is the Instructor Guide for Lesson number nine of the training on the ZBV van, concerns the components of the van, and was most recently updated on July 25th, 2006. It is a Word document as identified by the filename extension.

Each lesson shall be identified by a numbered tab in the physical book.

3.7.3 Student Manual

AS&E shall develop and distribute a Student Manual for ZBV Training to provide each student with clear, concise study materials necessary to attain the learning objectives in the minimum time.

The Student Manual shall conform CBP standards, including that it be written in a Microsoft Office product.

The Student Manual shall be divided into lessons, according to the course outline, and shall cover exactly the same material as the corresponding IG segment.

The file for each SM segment shall be entitled in the following manner:

Item	Example
Course name	ZBV
Document Type	SM
Lesson number (Lxx)	L09
Lesson's abbreviated name	Components
Date of most recent version (year-month-day)	2006-07-25

Example file name/title: ZBV SM L09 Components 2006-07-25.ppt

This indicates that the file is the Student Manual for Lesson number nine of the training on the ZBV van, concerns the components of the van, and was most recently updated on July 25th, 2006. It is a Word document as identified by the filename extension.

Each lesson shall be identified by a numbered tab in the physical book.

3.7.4 Job Aids

Job Aids shall consist of lists of process steps, check lists, diagrams, sketches, charts, graphs, pictures or other visual matter necessary for student reference to support the information presented in the Course and the operation of the equipment.

All job aids shall be named in the following manner:

Item	Example
Equipment name	ZBV
Job aid number (JAxx)	JA05
Process supported	Start Up
Date of most recent version (year-month-day)	2006-07-25

Example file name/title: ZBV JA05 Start Up 2006-07-25.doc

This indicates that the file is job aid number five for operating the ZBV van, concerns starting up the system, and was most recently updated on July 25th, 2006. It is a Word document, as identified by the filename extension.

Each job aid shall be provided as a separate sheet or sheets in the physical SM and IG.

3.7.5 Training Aids

AS&E shall provide image analysis software that will allow students to manipulate images just as they will in using the actual ZBV system. AS&E shall also provide technical assistance to CBP in developing a database of approximately 50 images for the image analysis phase of the Practical Training. AS&E shall provide a file containing the images, tools for enhancement, etc. which the trainer needs to conduct the training on image analysis.

AS&E shall provide any other training aids that they feel will enhance the quality and effectiveness of the training.

3.7.6 Personal Qualification Standard

AS&E shall develop standards of performance to be achieved by students to demonstrate their mastery of the skills taught (Personal Qualification Standard or PQS). These standards shall name all specific tasks to be performed in: operating and maintaining the van; capturing, analyzing, annotating and saving images; and all other skills taught in the course. For each skill identified AS&E shall specify an observable performance standard.

The Instructor shall administer the PQS for each student during Practical Training and verify that each student is proficient in the activity. All PQS items should be directly linked to an enabling objective.

3.7.7 Image Interpretation Software

AS&E shall deliver to CBP all necessary software to view, manipulate and store images scanned by the ZBV system. This shall include all information/software necessary to reload the software onto the laptops used in conducting the training. In addition, AS&E shall provide images scanned by the ZBV system sufficient to enable students to practice extensively during the training.

3.7.8 Images

AS&E shall work with CBP to gather and create (when necessary) images to be used in the training. These images should include with anomalies and without. All seizure images have to be from closed cases. All images need manifest information and identify what (if any) is the anomaly. Images should also include mock WME.

3.7.9 Image Analysis Exercises and Manual

In addition, AS&E shall provide image analysis exercises that can be conducted in the classroom on computers for each student. This will enable students to practice with actual images prior to practicing with live stream of commerce.

3.7.10 Other Audiovisual aids

AS&E shall provide any additional audiovisual aids necessary to complement the instruction. Stimuli such as screen shots, slides, wall charts, actual size or reduced scale photographs, motion videos [tape, CD, DVD], or computer-based training or testing may be used.

3.8 Training Delivery

CBP will conduct reviews of the course and course materials prior to presentation of the initial (pilot) presentations.

CBP will be in regular informal communication with AS&E as the courseware is developed.

3.8.1 Trainer Familiarization Session

AS&E shall host a trainer familiarization session during which as many as six CBP representatives will be shown how to operate the ZBV system (van, computer software and any ancillary equipment). This session shall last up to three days. AS&E shall provide two instructors for this session. This session *must* take place before the first draft (3.5.4) is delivered. Ideally, it will take place during the development of design plan.

3.8.2 Development of First Draft of Materials
The instructor guide will be the first draft of materials delivered to CBP. Changes will be made per CBP direction.

3.8.3 Final Draft of Materials
The final draft will include the final instructor guide, student manual, job aids, PQS, exercise, and any other support materials. These will be reviewed by CBP and changed as requested.

3.8.4 Beta Test

AS&E shall host a Beta session of the course, during which time two AS&E instructors will present the training to as many as eight CBP-selected personnel exactly as planned for delivery to Office of Field Operations (OFO) personnel. This Beta session will be delivered at a Port of Entry mutually agreed upon. CBP will critique the course and its delivery, and provide feedback regarding required changes. AS&E shall revise the courseware and its delivery as required. This

session will certify instructors as operators. Only these instructors will attend the Train-the-trainer (T3) session.

3.8.5 Pilot Session

AS&E shall conduct a pilot session of the course,[1] delivered to OFO personnel under the observation of CBP-designated observers. AS&E shall supply one copy of all courseware to each observer and the required materials to each participant. AS&E shall provide two instructors for this session. This will serve as a final session for course development and will be delivered at a Port of Entry mutually agreed upon. CBP will critique the course and provide recommended changes. AS&E shall revise the courseware and its delivery, as required.

3.8.6 Final Version
Based on input from CBP, AS&E shall revise the courseware per the instructions received from CBP, and deliver the final version of the courseware to the Government per the development schedule.

3.8.7 Train The Trainer Session

AS&E will present at 3-day train-the-trainer (T3) on how to best present the materials. During the T3 the instructors, will be provided the opportunity to present materials in a teachback format.

3.8.8 Initial Sessions Supported by AS&E

For the eight instructors to be trained, the initial session they teach in teams of two must be supported by 2 qualified AS&E instructors. This will result in four sessions supported by AS&E after the T3.

4.0 DELIVERABLES

4.1 Courseware

The deliverables listed below shall be conveyed to the Government free of Trade Mark, logos or proprietary claim by AS&E, and with the unlimited right of alteration, reproduction and/or distribution within the Government. Manuscript covers shall also bear markings to identify the course title, course code, and contract number. AS&E is restricted from use of these products for any purpose other than CBP training without the expressed written permission of the Contracting Officer.

Deliverables created through the use of word processing and graphic software programs shall utilize programs that are directly compatible with hardware and software used by CBP, e.g., Microsoft Office 2000®, Microsoft Windows 2000® operating system and IBM clone personal computers.

[1] Roll-out #1.

All training materials (Instructor Guide, Student Manual, audiovisual presentations, job aids, handouts, and any other courseware) must conform to the visual and electronic templates supplied by CBP and provided as GFI.

The Presentation Set of deliverables shall be delivered to the Government on CD/ROM media for review and acceptance after completion of the pilot session of the course, incorporating any final changes indicated by the Government.

AS&E shall provide three (3) copies of the Presentation Set upon Government acceptance. The following items comprise the set:

- Audiovisual presentations
- Instructor Guide
- Student Manual
- Job Aids
- Training Aids
- Image Analysis Exercises using the image analysis software on laptop computers
- Personal Qualification Standard
- Any other training aids or materials mutually agreed upon (in an editable format mutually agreed upon[2])
- Images

AS&E shall deliver the courseware to CBP in electronic form as specified on three duplicate CD/ROMs. AS&E shall maintain electronic versions of these materials at their own facilities with appropriate back-up until the end of this contract. AS&E shall provide additional copies upon request at no additional cost.

4.2 Other Deliverables

The deliverables also include:

- Notes from kick-off meeting
- Management Plan
- Design plan
- Task Analysis report
- Beta test of the courseware taught by qualified AS&E instructors
- Trainer Familiarization Session
- Train the Trainer Session taught by qualified AS&E instructors

[2] Files in .pdf format are not acceptable.

- Pilot
- Hard copies of SM and Job Aids to each student in each class taught by AS&E
- Hard copies of SM, Job Aids and IG to each observer in each class taught by AS&E
- Initial CBP-Staffed Session supported by qualified AS&E instructors (4 sessions)
- The contractor shall provide as Contractor Furnished Equipment (CFE) the necessary training equipment such as projectors or computers to support the ZBV training course. Upon completion of the final course, the contractor will deliver to the Government all equipment used during the training courses

4.3 Required Qualifications for AS&E Instructors

AS&E shall present to CBP a written statement of the qualifications of each Instructor at least 30 days prior to the scheduled training session. CBP shall have the right to refuse any given Instructor and to require that AS&E assign a more acceptable Instructor.

Instructors' qualifications include capability and experience in the following fundamentals of training: interpersonal skills, podium/platform skills, presenting technical material, questioning, leading discussions, coaching, providing feedback and demonstrating technical equipment. In addition, they must be technically skilled, both in using the software and in identifying anomalies in backscatter images. Finally, they must be thoroughly expert in the procedures for maintaining the vehicle and skilled in its operation.

5.0 COURSE DEVELOPMENT SCHEDULE

All dates are based on the date of signature of contract (SOC), plus a given number of calendar weeks.

Task	**By**	**Finish** SOC + n calendar weeks	**Duration** in calendar days
Kick-off meeting (to review expectations and requirements)	AS&E + CBP	1	1
Familiarization Session	AS&E + CBP	1 to 6*	3
Task Analysis	AS&E + CBP	2	2
Design Plan	AS&E	3	7
Image Collection	AS&E + CBP	4	4
Provide feedback on design plan	CBP	5	7

Task	By	Finish SOC + n calendar weeks	Duration in calendar days
Provide final design plan	AS&E	6	7
Deliver first draft of instructor guide	AS&E	7	7
Provide feedback on first draft of instructor guide	CBP	8	7
Deliver draft of all courseware	AS&E	10	10
Provide feedback on draft of all courseware	CBP	11	7
Provide final draft of all courseware	AS&E	12	7
Preparation for Beta test	AS&E	12	7
Conduct Beta test of entire course	AS&E	13	2
Provide feedback on Beta test	CBP	13	2
Provide final version of the entire course	AS&E	15	14
Conduct final review	CBP	16	7
Make final revisions	AS&E	17	7
Preparation for pilot session test	AS&E	19	14
Deliver first (pilot) session of course to CBP Officers/Operators	AS&E	20	7
Deliver Final Materials	AS&E	21	7
Deliver Train The Trainer to CBP instructors	AS&E	22	7
Initial CBP-Staffed Sessions (4 sessions)	CBP and AS&E	At initial 4 systems deployment	---

* Can take place at any point before delivery of first draft courseware; earlier is better.

After delivery of the Train-The-Trainer CBP will take over delivery of training.

A list and concept description of the training equipment planned for use shall be delivered to the Government for review and approval. All training equipment procured under this contract shall be conveyed to the Government no later than two weeks after conclusion of the last presentation. Vendor warranty data and a list that identifies the sale price to the Government shall accompany the training equipment.

6.0 SUBCONTRACTING

If AS&E wishes to subcontract/outsource any courseware development or delivery to any outside entity, AS&E shall communicate that desire to CBP and submit the qualifications of such subcontractor to CBP for their approval. CBP may deny such subcontract at its sole discretion and without liability.

7.0 RIGHT TO OBSERVE

CBP has the absolute right to place observers in any training being conducted under this contract.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT	1. CONTRACT ID CODE	PAGE OF PAGES
		1 1

2. AMENDMENT/MODIFICATION NO.	3. EFF. DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
P00001	06/15/2007	0020023706	

6. ISSUED BY CODE 7014	7. ADMINISTERED BY *(If other than Item 6)* CODE
Department of Homeland Security Customs & Border Protection 1300 Pennsylvania Ave, NW NP 1310 Washington DC 20229	Dept of Homeland Security Customs & Border Protection Office of Procurement - NP 1310 1300 Pennsylvania Ave., NW Washington DC 20229

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and Zip Code)*		9A. AMENDMENT OF SOLICITATION NO.
AMERICAN SCIENCE & ENGINEERING INC 829 MIDDLESEX TPKE BILLERICA MA 01821		9B. DATED *(SEE ITEM 11)*
	X	10A. MODIFICATION OF CONTRACT/ORDER NO. / HSBP1006F13487
CODE 000000000 FACILITY CODE		10B. DATED *(SEE ITEM 13)* 09/30/2006

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(Such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: 41 U.S.C. 253(c)(1)
	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not ☒ is required to sign this document and return 1 copies to issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Three AS&E Z Backscatter Vans and one Stationary Scan Mode Field Upgrade as described in the Schedule of Supplies/Services Section of this modification.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*	15C. DATE SIGNED	16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	16C. DATE SIGNED
(b) (4); (b) (6) (b) (6)	June 15, 2007	Linda Krough (b) (6)	6/15/2007

EV. 10-83)
3 CFR) 53.243

ATTACHMENT INFORMATION
FOR
AWARD/ORDER/IA HSBP1006F13487 , MODIFICATION P00001

SCHEDULE OF SUPPLIES/SERVICES

Item Number:	00180	Line Item (Priced/Information/Option):	P	
Supplies/Services:	ZBV Large Scale NII Img. System			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00190	Line Item (Priced/Information/Option):	P	
Supplies/Services:	ZBV Large Scale NII Img. System			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00200	Line Item (Priced/Information/Option):	P	
Supplies/Services:	ZBV Large Scale NII Img. System			
	Qty	Unit	Unit Price	Ext. Price
	1	EA	(b) (4)	(b) (4)
Item Number:	00210	Line Item (Priced/Information/Option):	P	
Supplies/Services:	Other Services			
	Qty	Unit	Unit Price	Ext. Price
	1	AU	(b) (4)	(b) (4)

Total Funded Contract Value: $2,006,010.20

Reference AS&E quote ASEQ2562A dated June 7, 2007, this modification orders three Z-Backscatter Van (ZBVs) mounted on Dodge Sprinter Chases for delivery to CBP ports of entry at Calexico, CA, Otay Mesa, CA and West Palm Beach, FL. The CBP retains the option to order three more ZBV's and the balance of options offered as priced on this quote by September 30, 2007. The line items on this order modification include the following components:

CLIN 00180

1 ea Z Backscatter Van @(b) (4)
1 ea Operator Training credit @(b) (4)
1 ea Radioactive Threat Detection Open Market Option @(b) (4)
1 ea Harsh Environment Open Market Option @(b) (4)
1 ea Stationary Scan Mode Open Market Option @(b) (4)
Estimated freight for (b) (4), delivery to Calexico, CA @ (b) (4)
Total:(b) (4)

CLIN 00190

1 ea Z Backscatter Van @(b) (4)
1 ea Operator Training credit @(b) (4)
1 ea Radioactive Threat Detection Open Market Option @(b) (4)
1 ea Harsh Environment Open Market Option @(b) (4)
1 ea Stationary Scan Mode Open Market Option @(b) (4)
Estimated freight for August 15, 2007, delivery to Otay Mesa, CA @(b) (4)
Total:(b) (4)

CLIN 00200

1 ea Z Backscatter Van @(b) (4)
1 ea Operator Training credit @(b) (4)
1 ea Radioactive Threat Detection Open Market Option @(b) (4)
1 ea Harsh Environment Open Market Option @(b) (4)
1 ea Stationary Scan Mode Open Market Option @(b) (4)
Estimated freight for (b) (4) delivery to West Palm Beach, FL
@(b) (4)
Total: (b) (4)

CLIN 00210

1 ea Stationary Scan Mode Field Upgrade for ZBV unit operating at CBP's POE Miami, FL @(b) (4)

ACCOUNTING AND APPROPRIATION INFORMATION

Item: 00180 1750.3111USCSGLCS0923100110Z00007400AP06 509033111
Amount (b) (4)

Item: 00190 1750.3111USCSGLCS0923100110Z00007400AP06 509033111
Amount (b) (4)

Item: 00200 1750.3111USCSGLCS0923100110Z00007400AP06 509033111
Amount (b) (4)

Item: 00210 6100.2525USCSGLCS0923100110Z00007400AP06 509032525
Amount (b) (4)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT	1. CONTRACT ID CODE	PAGE OF PAGES 1 3

2. AMENDMENT/MODIFICATION NO.	3. EFF. DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
P00002	09/12/2007	0020029396	

6. ISSUED BY CODE 7014	7. ADMINISTERED BY *(If other than Item 6)* CODE
Department of Homeland Security Customs & Border Protection 1300 Pennsylvania Ave, NW NP 1310 Washington DC 20229	Dept of Homeland Security Customs & Border Protection Office of Procurement - NP 1310 1300 Pennsylvania Ave., NW Washington DC 20229

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and Zip Code)*		9A. AMENDMENT OF SOLICITATION NO.
AMERICAN SCIENCE & ENGINEERING INC 829 MIDDLESEX TPKE BILLERICA MA 01821		9B. DATED *(SEE ITEM 11)*
	X	10A. MODIFICATION OF CONTRACT/ORDER NO. / HSBP1006F13487
CODE 000000000 FACILITY CODE		10B. DATED *(SEE ITEM 13)* 09/30/2006

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (*Such as changes in paying office, appropriation date, etc.*) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: 41 U.S.C. 253(c)(1)
	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not ☒ is required to sign this document and return 1 copies to issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Reference AS&E quote ASEQ2562A dated June 7, 2007, this modification orders three Z-Backscatter Van (ZBVs) mounted on Ford F550 Chasses for delivery to CBP ports of entry at New York, NY, Houston, TX and Los Angeles, CA. The line items on this delivery order modification include the following components:

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. (b) (4); (b) (6)	15C. DATE SIGNED 9/21/07	16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)* Linda M. Krough	16C. DATE SIGNED 9/29/07
15B. (b) (6)		16B. (b) (6)	

V. 10-83)
CFR) 53.243

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT - Continuation			1. CONTRACT ID CODE	
2. AMENDMENT/MODIFICATION NO. P00002	3. EFF. DATE 09/12/2007	4. REQUISITION/PURCHASE REQ. NO. 0020029396	PAGE 2	OF PAGES 3

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

CLINs 00220 and 00230 Combined
1 ea Z Backscatter Van @ (b) (4)
1 ea Operator Training credit @ (b) (4)
1 ea Radioactive Threat Detection Open Market Option @ (b) (4)
1 ea Harsh Environment Open Market Option @ (b) (4)
1 ea Stationary Scan Mode Open Market Option @ (b) (4)
Estimated freight for (b) (4) livery to Houston, TX @ (b) (4)
Total: (b) (4)

This unit will be in on site for SAT on (b) (4)

CLIN 00240
1 ea Z Backscatter Van @ (b) (4)
1 ea Operator Training credit @ (b) (4)
1 ea Radioactive Threat Detection Open Market Option @ (b) (4)
1 ea Harsh Environment Open Market Option @ (b) (4)
1 ea Stationary Scan Mode Open Market Option @ (b) (4)
Estimated freight for (b) (4) livery to New York, NY @ (b) (4)
Total: (b) (4)

This unit will be in on site for SAT on (b) (4)

CLIN 00250
1 ea Z Backscatter Van @ (b) (4)
1 ea Operator Training credit @ (b) (4)
1 ea Radioactive Threat Detection Open Market Option @ (b) (4)
1 ea Harsh Environment Open Market Option @ (b) (4)
1 ea Stationary Scan Mode Open Market Option @ (b) (4)
Estimated freight for (b) (4) elivery to Los Angeles, CA @ (b) (4)
Total: (b) (4)

This unit will be in on site for SAT on (b) (4)

CLIN 00260
1 ea Stationary Scan Mode Field Upgrade for ZBV unit operating at CBP's POE Calexico, CA @ (b) (4) by a date to be determined.

CLIN 00270
1 ea Stationary Scan Mode Field Upgrade for ZBV unit operating at CBP's POE Fabens, TX @ (b) (4) by a date to be determined.

CLIN 00280
1 ea Stationary Scan Mode Field Upgrade for ZBV unit operating at CBP's POE Presidio, TX @ (b) (4) by a date to be determined.

CLIN 00290
1 ea Stationary Scan Mode Field Upgrade for ZBV unit operating at CBP's POE Laredo, TX @ (b) (4) by a date to be determined.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT - Continuation			1. CONTRACT ID CODE
2. AMENDMENT/MODIFICATION NO. P00002	3. EFF. DATE 09/12/2007	4. REQUISITION/PURCHASE REQ. NO. 0020029396	PAGE 3 OF PAGES 3

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

CLIN 00300
1 ea Cold Weather Field Upgrade for ZBV unit operating at CBP's POE, Miami, FL @ (b) (4) by a date to be determined.

CLIN 00310
1 ea Cold Weather Field Upgrade for ZBV unit operating at CBP's POE, Calexico, CA @ (b) (4) by a date to be determined.

CLIN 00320
1 ea Cold Weather Field Upgrade for ZBV unit operating at CBP's POE, Fabens, TX @ (b) (4) by a date to be determined.

CLIN 00330
1 ea Cold Weather Field Upgrade for ZBV unit operating at CBP's POE, Presidio, TX @(b) (4) by a date to be determined.

CLIN 00340
1 ea Cold Weather Field Upgrade for ZBV unit operating at CBP's POE, Laredo, TX @ (b) (4) by a date to be determined.

The total funded value of this modification is $2,421,339.00

The new total funded value of this purchase order and all its modifications is $8,595,310.20

ATTACHMENT INFORMATION
FOR
AWARD/ORDER/IA HSBP1006F13487 , MODIFICATION P00002

ACCOUNTING AND APPROPRIATION INFORMATION

Item: 00220 1750.3111USCSGLCS0923100110Z00007400AP06 509033111
Amount (b) (4)

Item: 00230 1750.3111USCSGLCS0923100110Z00007400AP01 509033111
Amount (b) (4)

Item: 00240 1750.3111USCSGLCS0923100110Z00007400AP01 509033111
Amount (b) (4)

Item: 00250 1750.3111USCSGLCS0923100110Z00007400AP06 509033111
Amount (b) (4)

Item: 00260 6100.314AUSCSGLCS0923100110Z00007400AP06 50903314A Amount (b) (4)

Item: 00270 6100.314AUSCSGLCS0923100110Z00007400AP06 50903314A Amount (b) (4)

Item: 00280 6100.314AUSCSGLCS0923100110Z00007400AP06 50903314A Amount (b) (4)

Item: 00290 6100.314AUSCSGLCS0923100110Z00007400AP06 50903314A Amount (b) (4)

Item: 00300 6100.314AUSCSGLCS0923100110Z00007400AP06 50903314A Amount (b) (4)

Item: 00310 6100.314AUSCSGLCS0923100110Z00007400AP06 50903314A Amount (b) (4)

Item: 00320 6100.314AUSCSGLCS0923100110Z00007400AP06 50903314A Amount (b) (4)

Item: 00330	6100.314AUSCSGLCS0923100110Z00007400AP06 50903314A	Amount	(b) (4)
Item: 00340	6100.314AUSCSGLCS0923100110Z00007400AP06 50903314A	Amount	(b) (4)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT	1. CONTRACT ID CODE	PAGE OF PAGES 1 2

2. AMENDMENT/MODIFICATION NO.	3. EFF. DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
P00003	12/07/2007	0020023706	

6. ISSUED BY CODE 7014	7. ADMINISTERED BY *(If other than Item 6)* CODE
Department of Homeland Security Customs & Border Protection 1300 Pennsylvania Ave, NW NP 1310 Washington DC 20229	Dept of Homeland Security Customs & Border Protection Office of Procurement - NP 1310 1300 Pennsylvania Ave., NW Washington DC 20229

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and Zip Code)*		9A. AMENDMENT OF SOLICITATION NO.
AMERICAN SCIENCE & ENGINEERING INC 829 MIDDLESEX TPKE BILLERICA MA 01821		9B. DATED *(SEE ITEM 11)*
	X	10A. MODIFICATION OF CONTRACT/ORDER NO. / HSBP1006F13487
CODE 000000000 FACILITY CODE		10B. DATED *(SEE ITEM 13)* 09/30/2006

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(Such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Changes clause
	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not ☒ is required to sign this document and return 1 copies to issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

(b) (4) [redacted] the on-site acceptance test dates for the three Z-Backscatter Vans (ZBVs) ordered through Modification P00002 (b) (4) [redacted]

CBP Locations and new SAT dates:

New York (Port of Newark, NJ); (b) (4) [redacted]
Houston (Seaport); (b) (4) [redacted]
Blaine, WA; (b) (4) [redacted]

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*	16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*
(b) (4); (b) (6) [redacted]	Linda M. Krough Contracting Officer
(b) (6) [redacted]	(b) (6) [redacted]
15C. DATE SIGNED 12/5/07	16C. DATE SIGNED 12/5/2007

NSN 7540-01-152-8070
PREVIOUS EDITION UNUSABLE

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA FAR (48 CFR) 53.243

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT - Continuation			1. CONTRACT ID CODE
2. AMENDMENT/MODIFICATION NO. P00003	3. EFF. DATE 12/07/2007	4. REQUISITION/PURCHASE REQ. NO. 0020023706	PAGE 2 OF PAGES 2

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

As consideration for the (b) (4) of these units, the contractor, (b) (4), will update the ZBV software to a level that makes it consistent for CBP's entire ZBV fleet, and (b) (4) for the these units (b) (4).

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT	1. CONTRACT ID CODE	PAGE OF PAGES 1 | 2

2. AMENDMENT/MODIFICATION NO.	3. EFF. DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
P00004	01/16/2009	0020023706	

6. ISSUED BY CODE 7014

Department of Homeland Security
Customs & Border Protection
1300 Pennsylvania Ave, NW
NP 1310
Washington DC 20229

7. ADMINISTERED BY *(If other than Item 6)* CODE

Dept of Homeland Security
Customs & Border Protection
Procurement Directorate - NP 1310
1300 Pennsylvania Ave., NW
Washington DC 20229

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and Zip Code)*

AMERICAN SCIENCE & ENGINEERING INC

829 MIDDLESEX TPKE

BILLERICA MA 01821

CODE 000000000 FACILITY CODE

9A. AMENDMENT OF SOLICITATION NO.

9B. DATED *(SEE ITEM 11)*

X 10A. MODIFICATION OF CONTRACT/ORDER NO. / HSBP1006F13487

10B. DATED *(SEE ITEM 13)* 09/30/2006

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(Such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103 (b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor [X] is not ☐ is required to sign this document and return 1 copies to issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

The following line item changes are made to administratively reconcile estimated amounts obligated with actual amounts due, billed and paid on this delivery order:

Item No. 00070 INA Ocean/Inland Freight: the total amount is hereby reduced by (b) (4)

Item No. 00160 Other Services (training and freight): the total amount is hereby reduced by (b) (4)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*

(b) (4); (b) (6)

(b) (6)

15C. DATE SIGNED 1/7/09

16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*

Linda M. Krough

(b) (6)

16C. DATE SIGNED 1/13/2009

10-83)
Prescribed by GSA FAR (48 CFR) 53.243

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT - Continuation			1. CONTRACT ID CODE	
2. AMENDMENT/MODIFICATION NO. P00004	3. EFF. DATE 01/16/2009	4. REQUISITION/PURCHASE REQ. NO. 0020023706	PAGE 2	OF PAGES 2

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Item No. 00170 Other Services: the total amount of (b) (4) .

These order reductions total (b) (4) The new delivery order total is (b) (4)

ATTACHMENT INFORMATION
FOR
AWARD/ORDER/IA HSBP1006F13487 , MODIFICATION P00004

SCHEDULE OF SUPPLIES/SERVICES

Item Number: 00070 **Line Item (Priced/Information/Option):** P
Supplies/Services: INA Ocean/Inland Freight

Qty	Unit	Unit Price	Ext. Price
1	EA	(b) (4)	(b) (4)

Item Number: 00160 **Line Item (Priced/Information/Option):** P
Supplies/Services: Other Services

Qty	Unit	Unit Price	Ext. Price
1	AU	(b) (4)	(b) (4)

Item Number: 00170 **Line Item (Priced/Information/Option):** P
Supplies/Services: Other Services

Qty	Unit	Unit Price	Ext. Price
1	AU	(b) (4)	(b) (4)

Total Funded Contract Value: $73,055.2100

ACCOUNTING AND APPROPRIATION INFORMATION

Item: 00070	6100.2525GLCS0900800000ZIAC051R0AP04 941752525	**Amount** (b) (4)
Item: 00160	6100.2525USCSGLCS0923080000Z00006400AP01 IS7562525	**Amount** (b) (4)
Item: 00170	6100.2525USCSGLCS0923080000Z00006400HQ01 IS7562525	**Amount** (b) (4)