REQUEST FOR QUOTATION

SOLICITATION NUMBER: USDA-FS-13-07
AERIAL PHOTOGRAPHY SERVICES
for Yakutat Ranger District, Tongass National Forest, Alaska
Quotation Due Date: August 17, 2007

U.S. DEPARTMENT OF AGRICULTURE
FARM SERVICE AGENCY
AERIAL PHOTOGRAPHY FIELD OFFICE

NOTICE TO PROSPECTIVE OFFERORS :

OFFERORS ARE CAUTIONED TO NOTE THE FOLLOWING SPECIAL CONTRACT REQUIREMENTS:

The following information must be submitted with any price quotation: Aircraft and camera(s) proposed for use, incomplete contracts, technical capability statement, past performance and Preliminary Flight Plan. See Section A (Pages 2-3).

Alternate proposals and innovative approaches will be considered.

See Section B, Paragraph 1.3(e), Color Negative Film is required.

See Section B, Paragraph 1.3(g), Full size color inspection prints are required.

See Section C, Inspection Prints for instructions. Color Balance Samples are required.

The complete text of any or all clauses referenced herein may be obtained by submitting a request, identifying this solicitation number, to the Contracting Officer, USDA, FSA, Aerial Photography Field Office, 2222 West 2300 South, Salt Lake City, Utah 84119. Complete copies of the FAR in loose-leaf or CFR form may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402.

REQUEST FOR QUOTATION
(THIS IS NOT AN ORDER)

THIS RFQ ☐ IS ☒ IS NOT A SMALL BUSINESS SET-ASIDE

1. REQUEST NO.	2. DATE ISSUED	3. REQUISITION/PURCHASE REQUEST NO.	4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1	RATING
USDA-FS-13-07	08/10/07			

5a. ISSUED BY
USDA-FSA, Aerial Photography Field Office

6. DELIVER BY *(Date)*
10/15/07

5b. FOR INFORMATION CALL *(NO COLLECT CALLS)*

NAME	TELEPHONE NUMBER	
	AREA CODE	NUMBER
John Mootz	801	975-3500 Ext. 284

7. DELIVERY
☒ FOB DESTINATION ☐ OTHER *(See Schedule)*

9. DESTINATION
a. NAME OF CONSIGNEE
USDA-FSA-APFO
b. STREET ADDRESS
2222 West 2300 South
c. CITY
Salt Lake City
d. STATE
UT
e. ZIP CODE
84119

8. TO:
a. NAME
b. COMPANY
c. STREET ADDRESS
d. CITY
e. STATE
f. ZIP CODE

10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFICE IN BLOCK 5a ON OR BEFORE CLOSE OF BUSINESS *(Date)*
08/17/07

IMPORTANT: This is a request for information, and quotations furnished are not officers. If you are unable to quote, please so indicate on this form and return it to the address in Block 5a. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or service. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotation must be completed by the quoter.

11. SCHEDULE *(Include applicable Federal, State and local taxes)*

ITEM NO. (a)	SUPPLIES/ SERVICES (b)	QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)
1	Aerial Photography Services, in accordance with attached services and specifications, of Item 1: Yakutat Ranger District, Option Item 1A: ABGPS and IMU data Option Item 1B: Scanning Services Quotations must include this form, page 2, preliminary flight plan, and any additional information necessary *Quotations may be submitted by fax (801)975-3512 on or before 4:30 pm MDT Aug 17, 2007 to the Contracting Officer	616	SqM		

12. DISCOUNT FOR PROMPT PAYMENT	a. 10 CALENDAR DAYS (%)	b. 20 CALENDAR DAYS (%)	c. 30 CALENDAR DAYS (%)	d. CALENDAR DAYS NUMBER	PERCENTAGE

NOTE: Additional provisions and representations ☐ are ☐ are not attached.

13. NAME AND ADDRESS OF QUOTER
a. NAME OF QUOTER
b. STREET ADDRESS
c. COUNTY
d. CITY
e. STATE
f. ZIP CODE

14. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION

15. DATE OF QUOTATION

16. SIGNER
a. NAME *(Type or print)*
b. TELEPHONE
AREA CODE
NUMBER
c. TITLE *(Type or print)*

NOTE: THIS SECTION MUST ACCOMPANY ANY QUOTATION SUBMITTED.

SECTION A

REQUIRED STATEMENTS OF OFFERORS

A-1 AIRCRAFT TO BE USED IN COMPLETION OF ITEM(S) IN THIS CONTRACT:			
Make/Model	Registration Number	Operating Ceiling	Bidder Owned (check appropriate block)
			[ ] Yes [ ] No
			[ ] Yes [ ] No
*If the aircraft is/are not offeror owned, a written statement of availability from the owner of the aircraft must be enclosed. See Section C-2.			

A-2 CAMERA(S) TO BE USED IN COMPLETION OF ITEM(S) IN THIS CONTRACT			
Make/Model	Lens Number	Magazine Number	Bidder Owned (check appropriate box)
			[ ] Yes [ ] No
			[ ] Yes [ ] No
Current calibration report(s) must be enclosed or on file at the Aerial Photography Field Office. *If the camera(s) is/are not offeror owned, a written statement of availability from the owner(s) of the camera(s) must be enclosed. See Section C-2.			

A-3 INCOMPLETE CONTRACTS AS OF DATE OF OFFER:		
Remaining Linear Miles	Summer	Winter
U.S. Government Contracts:		
All Other Contracts:		

A-4 TECHNICAL CAPABILITY STATEMENT

A brief statement regarding: Offeror's technical capability to successfully perform this contract must be submitted with offer.

A-5 PRELIMINARY FLIGHT PLAN

Offerors must submit a preliminary flight plan detailing the proposed acquisition approach with the offer. The Government prefers complete coverage of the project area but is willing to consider unique and innovative approaches, such as eliminating some coverage, to minimize the contract cost. The

preliminary flight plan should include the estimated number of linear miles, estimated number of exposures, and a project map of showing planned flight lines.

The contractor is required to determine the precise number of exposures for the purpose of establishing project quantities, based on the flight planning description above. The quantity of exposures/scans shall be entered in the space provided in Section B-1A and B-1B (Pages 6 and 7) and shall be the pricing basis for award and exercising of option(s). The quantities calculated by each offeror will be compared for accuracy and are subject to review and negotiation.

A-6 PAST PERFORMANCE REFERENCES

If no previous contracts have been held by the offeror with the USDA Aerial Photography Field Office, list at least two (2) references, with which the offeror has held similar contracts. If possible, one reference should be within the Federal government. List company or agency name, address, name of person to contact, and telephone number.

SECTION B

PROJECT SERVICES AND REQUIREMENTS

Furnish aerial photographic services and related supplies in accordance with the requirements, specifications, terms, conditions specified herein.

B-1: PROJECT ITEM 1: YAKUTAT RANGER DISTRICT, ALASKA		
LINE ITEM	PROJECT CODE	SQUARE MILES
Yakutat Ranger District, Alaska	610070	616
The offeror is required to provide the flight planning to determine the total linear/square miles and total quantity of exposures/scans for the Yakutat Ranger District area proposed. PLEASE NOTE: The government reserves the right to award less than complete coverage, i.e., reduced number of flight lines.		

1.1 Materials To Be Delivered

(a) Original Color Negative Aerial Film
(b) One (1) set of Color Inspection Prints
(c) One (1) set of Color Balance Samples
(d) CD-ROM containing Photo-Center and Project Description files

1.2 Intended Use of Photography

The imagery shall be used by Forest Service to collect and measure resource data by means of photo interpretation and Geographic Information Systems (GIS) technologies.

1.3 Project Requirements

(a) Nominal Photographic Scale: 1:12,000

(b) Approximate Photographic Period: August 20, 2007 through September 15, 2007.

(c) Minimum Sun Angle: 30 Degrees

(c) Overlaps:

(1) Endlap: Optimum 62%, Minimum 57%, Maximum 67%
(2) Sidelap: Minimum 0% Maximum 30%

(d) Aerial Camera:

(1) Lens Focal Length: 6 inch (153 mm)
(2) Filter: Antivignetting
(3) See Section C-2 and Section C-3.

(e) Aerial Film: Color Negative Film. (Kodak Aerocolor Negative Film 2444, Agfa Aviphot X100, or equal.) See Section C-6.

(f) Film Titling:

(1) Every exposure shall be titled in accordance with the format and instructions specified herein.
(2) Film Roll Numbers: 107, 207, 307, etc.
(3) Agency Designator: USDA-F
(4) Project Identification Code(s): 610070
(5) See Section C-7 for instructions and titling format.

(g) Inspection Prints: Inspection prints shall be full-size contact prints prepared according to instructions specified in Section C-8.

(h) Digital Photo-Center Data File: A digital photo-center data file is required and shall be prepared by the Contractor in accordance with Section C-9 for description and instructions.

1.4 Project Flight Planning Requirement

Contractor is required to provide the necessary flight line plans, which shall include flight altitude determinations, for the acquisition of precise vertical aerial imagery in accordance with the technical requirements in Section C-4 and C-5.

1.5 Government Furnished Materials: Pursuant to FAR Clause 52.245.19, Government Furnished Property, Government shall only furnish the items listed below.

(a) The Contractor will be furnished upon award one (1) ESRI® compatible shapefile containing the required contract coverage
(b) Project Map: See Exhibit 1.

1.6 Photographic Operations

(a) Air Space Clearance:

(1) This Project Item may contain areas of controlled or restricted airspace.
(2) It is the responsibility of the Contractor to obtain all approvals necessary to assure That specified altitudes are achieved.

(b) Terrain Conditions:

(1) Type of Ground Cover: Forest
(2) Photography must be acquired when neither snow nor flooding obscures the ground.
(3) See Section C-5.

(c) Progress Reports:

(1) A Progress Report is required for each day progress is made in acquiring project photography.
(2) Reports shall be transmitted by e-mail, in accordance with the syntax and format listed in Exhibit 3, following each day of progress. An e-mail address will be provided to the contractor at contract award.

OPTIONAL AWARD ITEM

In the space provided, please indicate the unit price and total amount for the optional award item.

B-1A – PROJECT ITEM 1A: ABGPS and IMU DATA for the YAKUTAT RANGER DISTRICT, ALASKA				
PROJECT AREA	QTY.	UNIT	UNIT PRICE	TOTAL
Yakutat Ranger District, Alaska			$	$

This item is an optional award item and may or may not be awarded. The Contracting Officer may exercise the option by notice to the Contractor within 7 days of the contract award. Offers on this item will be considered only in conjunction with offers on Project Item 1.

1A.1 Materials To Be Delivered

(a) ABGPS and IMU data and metadata files
(b) Supplemental ground control
(c) Upgraded Photo-Center data file

1A.2 Project Requirements

The Contractor shall collect and process high precision, Airborne Global Positioning System (ABGPS)/ Inertial Measurement Unit (IMU) date.

(a) Carrier-phase airborne multi-channel kinematic Global Positioning System (GPS) shall be acquired and used along with Inertial Measurement Unit (IMU) measurements in

processing trajectories. The performance specification for post-processed positioning solution accuracy shall be no worse than 2m (6.6 ft) relative to the National Spatial Reference Frame.

(b) ABGPS/IMU data files. The Contractor shall post-process GPS/IMU data collected. The Contractor shall submit both raw and processed data. The processed data shall be expressed as US State Plane (oblique mercator projection), AK Zone 1/FIPS 5001, NAD83/GRS1980, units: meters and be compatible with ERDAS Imagine. The Contractor shall create a FGDC compliant metadata file for the ABGPS/IMU data.

(c) Supplemental Ground Control. Differentially corrected GPS Ground Control, if collected, used to supplement the ABGPS positional data adjustment shall be delivered in a non-proprietary format mutually agreeable to the Government and Contractor.

(d) Digital Photo-Center Data File: The ABGPS/IMU data shall be integrated into an upgraded digital photo-center required under section B-1.1.

1A.3 <u>ABGPS/IMU Equipment Requirements</u>:

(a) The GPS antenna shall be an FAA-approved antenna suitable for geodetic quality carrier-phase multi-channel reception and installed in accordance with FAA airframe modification requirements. Antenna should be located in a location near the camera to minimize lever arm lengths, and also in a location to provide optimal GPS signal quality and continuous reception in an appropriate, unobstructed location on the plane.

(b) The IMU shall be capable of determining the absolute orientation (roll, pitch, and yaw) and meet or exceed manufacturer's specifications.

OPTIONAL AWARD ITEM

In the space provided, please indicate the unit price and total amount for the optional award item.

B-1B – PROJECT ITEM 1B: SCANNING SERVICES OPTION for the YAKUTAT RANGER DISTRICT, ALASKA				
PROJECT AREA	QTY.	UNIT	UNIT PRICE	TOTAL
Yakutat Ranger District, Alaska		Scan	$	$

This item is an optional award item and may or may not be awarded. Offers on this item will be considered only in conjunction with offers on Project Item 1. Offers on this item will be considered only in conjunction with offers on Project Item 1.

1B.1 Materials To Be Delivered

(a) 24-bit color RGB Tagged Image Files (TIFF) scanned files
(b) Scan data file and Upgraded Project Description metadata files

1B.2 Project Requirements

Contractor shall furnish scans of all exposures used in the base requirement of this solicitation. Scans shall be clear and sharp in detail with uniform density, and free from dirt and other defects, resulting in a 6 inch (15.2 cm) ground sample distance (GSD) digital images.

(a) Image Quality

(1) Images shall be scanned and saved at the maximum bit depth allowed by the scanner in order to ensure that information is not lost in the tonal and color balance steps due to quantization.
(2) Images shall be have a tonal range that prevents the clipping of highlight or shadow details, clipping on either the highlight or shadow values. The medium value of the luminosity histogram should be approximately 127 ± 20.
(3) Images shall have a neutral tonal range without the dominance of any individual color. The difference between the minimum and maximum value in a RBG triplet of any nearly netural objects within the images shall be less than 10, with a preferred value greater than 5.

(b) File Format. Tagged Image Files (TIFF). Scanned files shall be submitted in accordance with the Baseline TIFF 6.0 file format as defined in the TIFF 6.0 Specifications. All baseline TIFF 6.0 files shall store data as uncompressed RGB full-color images as defined in the specification using the “little-endian” byte order and shall only contain one image file directory (IFD).

(c) File Naming Convention: The files shall have the following naming convention: YAKIMAGE<imagenumber><yymmdd>.tif (where<imagenumber>is a consecutively numbered value and <yymmdd> is the exposure date). The Contractor shall create a FGDC compliant metadata file for each image.

(d) Media Requirements. The delivery media for the scanned files shall be external combo USB2.0/IEEE1394 (Firewire) hard drives. All external hard drives shall be “Combo” style drives, capable of both USB2.0 and IEEE-1394 (Firewire) connections. The drives shall be formatted using Microsoft’s NTFS file system. The drives shall become property of the Government and will not be returned to the Contractor. Each drive shall have a label attached directly to the drive identifying the project contained on the drive in accordance with Exhibit 6, Figure 2, External Hard Drive Label.

(e) Scan Data File Requirements
Contractor shall furnish a Scan Data File in ASCII comma delimited text format containing the following attributes:

DESCRIPTION	MAXIMUM NUMBER OF CHARACTERS IN FIELD
Scan File Name:	30
Film Roll:	5*
Exposure Number:	3
Samples (Columns):	5
Lines (Rows):	5

* Roll number should be padded with leading zeros.

Example: YAKIMAGE15071027.tif,00107,203,18304,18304

(f) Project Description File: The scanner description data shall be integrated into an upgraded Project Description file required under section B-1.1.

B-2 ADMINISTRATIVE REQUIREMENTS

2.1 Evaluation of Offers

(a) Offers shall be evaluated according to the following criteria including all supporting information furnished by the offeror with their quotation. The following evaluation criteria are listed in descending order of importance.

1. Price: Completed SF-18. In the event of a mathematical error, the unit price takes precedence over the extended price.
2. Technical Capability: Completed Section A and brief statements describing the planned technical approach to job, project scheduling and site basing of aircraft, camera and crew availability, company's quality control system, personnel qualifications, and incomplete contracts.
3. Past Performance: Past performance record of similar projects or references.

Technical capability and past performance, when combined, are more important when compared to price.

(b) The Government reserves the right to make an award to other than the lowest priced offeror, or other than the highest technically rated offeror, when the perceived benefits and tradeoffs provide the Government the greatest value.

(c) The Government reserves the right to make an award to an offeror who's innovative preliminary flight plan reduces the overall cost and/or risk and the perceived benefits and tradeoffs of this approach provides the Government the greatest value.

(d) The Government will award a contract resulting from this solicitation to that responsive and responsible offeror whose offer represents the greatest value and is determined to be in the best interest and the most advantageous to the Government, price and other factors considered.

2.2 Evaluation of Options

The Government will evaluate offers for award purposes by including only the price for the basic requirement; i.e. options will not be included in the evaluation for purpose of award. Each option will be evaluated independently from the other.

2.3 Delivery Schedule

(a) Original Materials – Delivery Schedule

Film, prints, photo-center file, metadata file and Option Item B-1A, if exercised, are due thirty (30) calendar days after the photographic season end date or any authorized extension thereof.

If Option Item B-1B is exercised scans are due forty-five (45) calendar days after the photographic season end date.

(b) Remake Materials – Delivery Schedule

Remake materials requested by USDA shall be shipped as soon as possible after correction is made, but no later than 15 days after receipt in the Contractor's facility of the materials or data required to make the corrections. Signed delivery receipts will be required to verify date of receipt of such data or materials by the Contractor.

2.4 Contract Extensions

(a) Photographic Season Extension

The Government reserves the right to extend the photographic season of this contract beyond the approximate photographic period indicated in paragraph B-1.3. A lower minimum sun angle requirement may be necessary to allow the season extension. The Government may extend the season of this contract, at no increase in price, by written notice to the contractor at any time prior to the end of the photographic season.

(b) Extension of the Term of the Contract

IT IS THE EXPRESSED INTENT OF THE GOVERNMENT TO HAVE ALL PHOTOGRAPHY REQUIRED UNDER THIS CONTRACT COMPLETED WITHIN THE PHOTOGRAPHIC PERIOD SPECIFIED.

The Government reserves the right to extend the term of the contract if all photography under the contract has not been secured within the photographic period, through no fault of the Contractor. The Government may extend the term of this contract, at no increase in price, by written notice to the Contractor within six (6) months after the photographic season has ended. The Contracting Officer may exercise this option twice.

2.5 Ownership of Photographic Materials

All original photographic materials shall become the property of the Government upon formal acceptance. No reproductions shall be made prior to inspection by the Government unless specified in the contract or authorized by the Contracting Officer.

2.6 Aircraft Regulations and Certifications

All aircraft used in the performance of the work under this contract shall be maintained and operated in accordance with all regulations required by the U.S. Department of Transportation, Federal Aviation Administration (FAA). Aircraft operated in the acquisition of aerial photography under this contract shall be FAA certified to the highest flying altitude required to meet the nominal photographic scale of this solicitation.

2.7 Wage Determination

The Wage Determination applicable to any contract resulting from this solicitation is determined by the location of the Contractor's establishment. Wage Determination Number 1995-0222, Revision 20, Dated May 24, 2006, will be applicable for contractors nationwide.(See Exhibit 5.)

2.8 Invoices

Contractor invoices shall be submitted in an original and two copies to the Contracting Officer designated in this contract or on the delivery order to receive invoices. To constitute a proper invoice, the invoice must include the following information and/or attached documentation:

1. Name of the business concern and invoice date.
2. Contract number, or other authorization for delivery of property or services.
3. Description, price, and quantity of services actually delivered or rendered.
4. Shipping and payment terms.
5. Name (where practicable), title, phone number, and complete mailing address of responsible official to whom payment is to be sent.

Notice of an apparent error, defect, or impropriety in an invoice will be given to the Contractor within 7 days of receipt of an invoice and suitably documented.

2.9 Non-Discrimination Statement

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its program and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of Discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW., Washington, DC 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

SECTION C

DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C-1 SCOPE OF CONTRACT

The general scope of this contract is to procure precise vertical aerial photography for one or more of the following purposes; natural resource inventory, stereomodel compilation, analytical aerotriangulation, and extraction of data by means of photogrammetric measurements. See Section B for the specific intended use of photography and project requirements.

1.1 Introduction

The Contractor is responsible for furnishing aerial photographic services and related supplies and materials in accordance with requirements, specifications, terms and conditions specified herein.

(a) Technical Requirements and Specifications

The technical requirements and specifications of this contract are described in Section C which define the essential elements in securing high quality aerial photography. Any deviation from the specifications stated herein may cause increased time and effort in using the photography as intended.

(b) Delivery and Performance

All contract materials shall be shipped within the time limits and to the place of delivery specified on the resulting delivery/purchase order. Performance of the contract shall be authorized and monitored by the Contracting Officer and/or the Contracting Officer's Representative.

(c) Quality Control

Quality control shall be exercised by the Contractor continuously throughout the performance of the contract. Procedures shall be established to assure that all aerial photographic materials are delivered in accordance with the delivery schedule and at the required level of accuracy and quality. The Contractor shall acquire immediate reflights of any photography where coverage or film quality fails to meet minimum requirements of the contract specifications. Any marginal photography submitted for inspection which does not meet minimum requirements shall have the deficiency legibly handwritten in grease pencil on the inspection prints.

(d) Contract Material Inspection

All materials specified in Section B will be inspected to determine conformance to all Contract requirements and specifications. Inspections shall be performed at the APFO facility in Salt Lake City, Utah. If inspection of materials reveal marginal deficiencies, a review by the user agency may be performed to determine if deficiencies may cause increased time and effort in using the photography as intended. If any of the services do

not conform with the contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by re-performance, the Government may:

1. Require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and
2. Reduce the contract price to reflect the reduced value of services performed. The Government will make every effort to inspect all material specified within 30 calendar days after they are received at the point designated. Should the inspection procedure be delayed longer than 30 days, the Contractor will be notified on the reason(s) for delay and given the estimated completion date. Contract materials will be inspected in the order of their receipt, unless otherwise prioritized by the Government.

1.2 Location of Work

The project name(s), location, linear and square mile measure, and configuration of area to be photographed are described in Section B and shown on project map(s) in Exhibit 1.

1.3 Labor and Materials

The Contractor shall furnish all materials, equipment, transportation, superintendence, and labor as required herein. The Contractor shall execute and finish the aerial photographic services for the project specified and shall deliver to the USDA all materials called for Section B, Paragraph 1.1, Materials to be Delivered and those that may be exercised under Option B-1A and/or B-1B.

C-2 EQUIPMENT REQUIREMENTS

Any equipment (aircraft and cameras, in addition to those submitted at the time of offer) proposed to be used by the Contractor must be approved for use by the Contracting Officer. If the aircraft and camera proposed for use are not owned by the Contractor, a written statement of availability from the owner of the equipment shall be furnished to the Contracting Officer.

2.1 Aerial Camera and Filter

(a) Tested and calibrated precision aerial cameras for taking aerial photographs are required and must meet USDA Aerial Camera Specifications (see Section C-3 and Attachment A). Camera systems must be compatible with precision stereoscopic mapping instruments and with analytical mensuration procedures used in photogrammetric surveys and in preparing accurate topographic maps.

(b) Proposed camera systems will be evaluated to determine if they meet the contract specifications, based on a current USGS camera calibration test report. The Contracting Officer shall have the right to require the removal of a camera from use when deficiencies in photographic imagery attributable to the camera are found to exist. Any camera removed from use by the Contracting Officer shall not be returned to use on USDA projects until the cause of the malfunction is corrected to the satisfaction of USDA. That

determination will be based on acceptable samples and/or an additional test by the Optical Science Laboratory of the USGS, if directed by the Contracting Officer.

2.2 Aircraft

(a) All aircraft used in the performance of the work under this contract shall be maintained and operated in accordance with all regulations required by the U.S. Department of Transportation, Federal Aviation Administration (FAA). Aircraft operated in the acquisition of aerial photography under this contract shall be FAA certified to a service ceiling with operating load (crew, camera, film, oxygen, and other required equipment) of not less than the highest altitude specified in Section B.

(b) When the flight plan and location of any item in the proposed coverage fall within positive-control airspace, the aircraft must contain the appropriate equipment to operate in such positive-control areas within the purview of the Federal Aviation Regulations.

(c) The design of the aircraft shall be such that when the camera is mounted with all its parts within the outer structure, an unobstructed field of view is obtained. The field of view shall be shielded from the exhaust gases, oil, effluence, and air turbulence. Glass, plastic, or other window material shall not be interposed between the camera and the ground to be photographed unless authorized by the Contracting Officer.

2.3 Laboratory

The Contractor's laboratory shall be adequately equipped and staffed to facilitate the production of the specified photographic materials and other required products, or the Contractor shall have access to such facilities.

C-3 PRECISION AERIAL MAPPING CAMERA

3.1 USDA Aerial Camera Specifications

Only camera systems which meet the requirements of these specifications, as determined by a current USGS "Report of Calibration" test report, shall be used. Focal length and filter are specified in Section B. A camera system "Report of Calibration" will not be acceptable if more than three (3) years old at the scheduled date for receipt of offers. See Attachment A, Revision 8/10/99, for USDA Aerial Camera Specifications.

3.2 Camera Operation

The camera and its mount shall be checked for proper installation prior to each mission. Particular attention shall be given to electrical circuits which control fiducial and camera data box lights and to the vacuum supply. In conformance with conventional photogrammetric practice, it is the preference of the Government that the Contractor use camera configurations, that when installed in the aircraft, advance film parallel to the line of flight.

3.3 Camera Accessories

(a) Automatic Exposure Control: An automatic exposure control device is permitted, but a manual override capability is required for some types of terrain to achieve proper exposure.

(b) Camera Mount: The camera mount shall be regularly serviced and maintained and shall be insulated against aircraft vibration.

C-4 FLIGHT PLANNING

The Contractor shall provide flight line planning necessary to acquire precision, high quality imagery in order to provide the stereoscopic coverage and acquisition requirements specified in Section B. Planning shall include at a minimum, flight orientation exposure stations, flight altitude determinations, flight breaks, and overlap stereoscopic coverage.

C-5 IMAGERY ACQUISITION REQUIREMENTS

5.1 Photographic Conditions

Photography shall be undertaken when skies are clear, free from smoke, clouds, cloud shadows, excessive haze, and well-defined images can be resolved. The ground shall be free from snow below timberline, standing water (other than natural or man-made ponds and lakes), flood waters from streams which have overflowed their banks, and wet ground which obscures field, soil or crop lines.

5.2 Photographic Periods

Photography shall be undertaken only during that portion of the day when the sun angle exceeds the minimum specified in Section B. Photographic operations shall be limited to the dates specified in Section B or as otherwise provided in writing by the Contracting Officer.

5.3 Priorities for Photographing Project Areas

The Contracting Officer may direct by written order certain projects or areas listed under an item to be photographed in a priority order, weather and ground conditions permitting. All reasonable effort will be directed toward providing a schedule of operations favorable to both the Government and Contractor.

5.4 Flight Requirements

The Contractor shall obtain precise vertical aerial photography in accordance with the following technical requirements:

(a) Overlap: Endlap (overlap in the line of flight) and sidelap (overlap between adjacent flights) shall be met as stated in Section B-1.3(c), Overlaps.

(b) Deviation From Specified Flight Altitudes: Deviation from required flight altitudes necessary to achieve the nominal photographic scale specified in Section B-1.3, Project Requirements, shall not exceed 2% low or 3% high of the flight height above mean ground elevation.

(c) Crab: Any series of two or more photographs crabbed in excess of five degrees (5°) as measured between photographs in line and between adjoining lines may cause rejection of any or all of that particular flight line.

(d) Tilt: Exposure made with optical axis of the camera in a vertical position is desired. Tilt (departure from the vertical of any exposure exceeding four degrees (4°) or relative tilt between any two successive exposures exceeding six degrees (6°) may be cause for rejection of any or all of the flight line

(e) Flight Breaks: Where a break in the flight line occurs, planned or unplanned, the terminal exposure of any new flight segment shall begin and end one exposure beyond the center point of the original flight segment terminal exposure. Uninterrupted stereoscopic coverage is required at all flight breaks.

(f) Reflight Photography: Reflights for aerial photography shall be centered over the plotted flight line with no less than the one exposure overlap specified above for flight breaks. All flight segments shall consist of no less than three (3) exposures in length.

C-6 AERIAL FILM

All aerial film used on a project item shall be from one film type and manufacturer and be purchased by the Contractor. Extreme care shall be exercised to insure proper exposure and processing of film to minimize vignetting due to differential exposure. This differential shall not exceed that which would result from a basic ¼ stop difference in exposure.

6.1 Salient Film Characteristics

Only medium or fine grained, unexpired, polyester base film of the type specified in Section B shall be used. The film base shall have a nominal thickness of 4 mils and be 24.1cm (9.5 inches) wide. Color emulsions shall be sensitive to the entire visible spectrum plus an extended red sensitivity to approximately 720 to 750 nanometers.

6.2 Processing

All aerial film shall be processed under controlled sensitometric conditions, to achieve consistent and even development. Processing development gamma shall not vary more than 0.10 density units throughout the roll. All film shall be processed according to manufacturer's instructions.

Prior to processing, a 21-step sensitometric wedge (in 0.15 density increments) shall be exposed on one end of each roll of film and shall remain in the roll when delivered to USDA. A leader of at least two (2) meters (6 feet) shall be retained on each end of the roll.

6.3 Film Densities – Color Films

All color negative film shall be exposed and processed to the manufacturer's specifications. Modified or non-standard processing is not permitted on this contract. Density measurements will be taken on negatives using a transmission densitometer with a 2mm probe for scales 1:36,000 and larger and with a 1mm probe for scale 1:36,000 and smaller. Readings will be made no closer than 38mm (1.50 inches) from the image edge.

(a) All minimum (D-min) and maximum (D-max) densities as measured on the original aerial film negatives using status M filters shall be no lower more higher than the values provided below. All density values include the Base + Stain value.

Max Base and Fog	D Min	D Max
Red .25	.60 +/- .15	1.60
Green .15	.50 +/- .15	1.45
Blue .35	.50 +/- .15	1.35

(b) When required by the Contracting Officer to establish contract standards for color rendition, the Contractor shall supply representative samples of his/her work for evaluation. If approved, these shall be used as criteria for acceptance or rejection of the contract photographs.

6.4 Storage and Handling

(a) Aerial Film: Storage, exposure, and handling of all photographic materials shall be in accordance with the manufacturer's recommendation. The film shall not be rolled tightly on spools or in any way stretched, buckled, distorted, or exposed to excessive heat.

(1) Color and color infrared film shall be kept refrigerated in a waterproof container until one day before being exposed and returned to cold storage after exposure until processed.
(2) Cold storage temperature shall not be higher than 40 degrees Fahrenheit (4 degrees Celsius). The film shall be processed as quickly as possible after exposure.

(b) Film Containers: All rolls of aerial film shall be contained in Contractor furnished 5-3/4 inch diameter sturdy, cylindrical plastic cans.

(c) Film Can Labels: Film can labels shall be securely affixed to the side of each can and positioned so that the label can be read when the film can is standing with the lid end up. Labels will be furnished by the Government upon contract award. The Contractor shall type or nearly letter each film can label with the required information according to the format example. See Exhibit 2.

6.5 Dimensional Stability

The dimensional change in any direction across a 23cm (9 inch) distance shall not exceed 0.13mm (-0.005 inch) at 18-24° Celsius (65-75° Fahrenheit) and 45-55% relative humidity.

6.6 Physical Quality

All aerial film shall be free from chemicals, stains, tears, scratches, abrasions, water marks, finger marks, lint, dirt, and other physical defects. The imagery shall be clear and sharp in detail and uniform in density. It shall be free from light streaks, static marks, and other defects that would interfere with the intended purpose.

All film shall be thoroughly fixed and washed to insure freedom from chemicals and shall be of archival quality. Film or prints found to contain an excess of residual chemicals, by testing in accordance with manufacturer's procedures, may be rejected or returned to the Contractor for refixing and rewashing.

6.7 Composition of Film Roll

All aerial film on any one roll shall have the same roll number and shall consist only of exposures made with the same camera system (lens, cone, and magazine). Every exposure within a roll of film shall be titled regardless if it is rejected or unused for coverage. See Section C-7, Titling of Aerial Film.

Data strip with clock (date/time) must appear between each frame of imagery.

Two (2) meters (6 feet) of blank or unused film shall be left beyond the first and last used exposure on each roll or segment to serve as leader and trailer. Some unexposed film must be retained at the beginning or end of a roll for the step wedge which is required for controlled processing.

Film spools having a flange diameter of approximately 13.2cm (5-3/16 inches) shall be used, and only that length of film which can be wound on a spool without strain, leaving at least 3.2mm (1/8 inch) of flange exposed, shall be placed on each spool.

6.8 Splicing Film

Splicing shall be accomplished with 19mm (3/4 inch) pressure sensitive polyester base tape. The splices shall be of the butt-joint type with tape laced on both sides of the splice. Particular care shall be given to the alignment of the film when splicing, with care taken to trim all excess finding tape in order that the film will be perfectly straight after splicing. A splice shall not be closer than 13cm (5 inches) from the image edge of any accepted frame.

C-7 TITLING OF AERIAL FILM

Every exposure within a roll shall be titled regardless if acceptable or unacceptable, used or unused, rejected or accepted.

7.1 Required Titling

Each exposure shall be clearly titled in accordance with the following format example sketch and required project data:

+	MM-DD-YY	12:00	USDA-F	+	12	610070	207-222	+

Date: Month-Day-Year in standard numeric notation (MM-DD-YY).

Time: The local standard time of exposure shall be titled only on the first and last used Exposure in each strip and at each break in flight line, including breaks due to reflights.

Agency Designator: Government agency acronym as specified in Section B-1.3(f), Film Titling.

Scale: Nominal photographic scale represented by two digits to nearest thousand.

Code: Project identification code as specified in Section B.

Roll Number: Number in series, followed by the contract fiscal year designation specified in Section B.

Exposure Number: Per roll number in unbroken series beginning with 1, not 001 or 01.

7.2 Type and Size of Characters and Application

The characters used in titling shall be standard block lettering 6.35mm (1/4 inch) high. They shall be sharp, legible, and uniformly applied with non-flaking black ink. The titling shall be placed on the non-emulsion side of the film and may be applied by use of an ink drawing pen or stamp. No smears or transfer of marking ink to other parts of the film roll will be permitted. Heat transfer lettering devices may only be used if prior consent is obtained from the Contracting Officer.

7.3 Location of Titling Characters

Every exposure within a roll shall be titled regardless if unused or used, rejected or accepted. No exposure shall be removed from the roll unless authorized by the Contracting Officer or representative.

Identifying data shall be placed in line along the most northerly inflight (endlapped) edge of the aerial exposures of north-south flights and shall be placed along the western edge of the exposure of east-west flight. Titling shall be positioned so that the characters are 2.5mm (1/10 inch) from the image edge and 2.5mm (1/10 inch) from the corner fiducials.

7.4 Assigning Roll Numbers

(a) Original Photography: All rolls of film submitted shall be numbered consecutively beginning with the first number of those assigned in Section B.

(b) Reflight Photography: Rolls of film used in the photography of reflights ordered by the USDA shall also be numbered consecutively starting with the next highest roll number as assigned to the original rolls.

7.5 Rejected or Not Used Exposures

Every exposure within a roll shall be titled regardless if unused or used, rejected or accepted. No exposure shall be removed from the roll unless authorized by the Contracting Officer or representative.

C-8 INSPECTION PRINTS

Color inspection prints shall be made from the original aerial film and furnished for inspection. Inspection prints shall be of such quality to bring out all the details of the film image and to clearly indicate the acceptability of the coverage and technical requirements.

8.1 Color Balance Samples

The contractor must furnish samples of prints for a selection of the contrast and/or color balance to be used for the contact prints prior to printing.

Prior to printing the color contact prints, the contractor must furnish a minimum of three (3) sets of color contact prints produced from the original film for a selection of contrast and/or color balance. One set shall represent the type of ground cover specified in Section B-1.5, another set of the non-typical ground cover, and the final set shall represent both typical and non-typical ground cover. Each three-print set shall be made from the same exposure on a roll of film with two (2) of the contact prints within the set shifted 2.5 to 5 cc filtration in each direction from the central color balanced print.

8.2 Inspection Print Titling

All inspection prints shall be properly titled in accordance with Section C-7 above.

8.3 Inspection Print Preparation – Color Contacts

Full-size (9”x9”, 23cm x 23cm) color contact prints shall be grouped and stacked by flight line number. The prints in each flight shall be arranged starting in sequence from the most northern exposure or eastern exposure for N-S flights and E-W flights, respectfully. Each flight shall be bound with a sturdy paper band and identified by flight line number, roll number, and exposure number range.

8.4 Materials to be Used

Photographic papers of proper contrast must be used in making suitable inspection prints to bring out all the details of the film image. Prints must be properly developed and thoroughly fixed and washed. They must be clean and free from stains, blemishes, uneven spots, air bells, fog, and finger marks.

C-9 PROJECT DATA FILES

9.1 Photo-Center Data File Description

Contractor shall prepare a digital photo-center data file for all aerial photography acquired under this solicitation. The file(s) shall be provided in ASCII comma delimited text format. A comma delimited header line shall precede the data in each file as shown in the example below.
The latitude/longitude coordinates shall be expressed in decimal degrees with five (5) decimal places of precision (44.71936, -116.41498), formatted to NAD83 datum, and be accurate within 30 meters (100 feet) of the true photo center location. Longitude must be expressed as negative space for western hemisphere. The photo-center data shall include the following attributes:

DESCRIPTION	MAXIMUM NUMBER OF CHARACTERS IN FIELD
Project Code	7
Film Roll Number	5*
Exposure Number	3
Date of Exposure (YYYYMMDD)	8
Time HHMMSS	6**
Flight Line Number	3*
Camera Lens Serial Number	10
Calibrated Focal Length in millimeters (mm)	7
Latitude Coordinate (DD.DDDDD)	8
Longitude Coordinate (-DD.DDDDD)	10
Flight Altitude in meters at camera (MMMMM.MM;MSL)	8
Accuracy of <2m (Y or N)	1**
PDOP	3**
IMU Omega value (Radians)	10**
IMU Phi value (Radians)	10**
IMU Kappa value (Radians)	10**

*Roll and flight line numbers should be padded with leading zeros as necessary.
** Option Requirements

Example:
code,roll,exp,date,time,line,lens,cfl,lat,long,alt,accuracy,pdop,omega,phi,kappa
610070,000107,222,20070820,111530,004,12345678,210.002,44.71936,-116.41498,7048.63,Y,2, -.0001358,.0107300, -.8732658
610070,00207,230,20070820,111535,004,12345678,210.002,44.71936,-116.41498,7048.63,Y, -.0001358,.0107300, -.8732658

9.2 Project Description File

Contractor shall include a metadata file containing, at a minimum, the following data:

Project Name (Name as appears in Section B)
Nominal Photo Scale
Nominal Lens Focal Length
Film Type (CN, CIRP, B&W, etc.)
Number of Film Rolls
Coordinate System Datum
Coordinate Data Collection Method (GPS, Digitizing, etc.)
Estimated Accuracy of Coordinates (Within Meters or Feet)
Scanner Manufacturer and Model Number: "Free text with quotations"*
Date ASCII Exposure Data File was created

* Option Requirements

Example: Yakutat Ranger District, AK 1:12,000 153mm CN 9 NAD83 GPS 30m "Leica DW500 Photogrammetric Scanner"10152007

9.3 Media Requirement

The project data files shall be furnished on a single CD-ROM.

All compact disks (CDs) shall be delivered on archival media, 700 Megabytes (80-minute) per disk CD-R, ISO 9660 Mode 1 format using level 2 interchange. The contractor must insure that each and every copy session has been properly closed. No multi-session enabled CDs shall be acceptable. The CD media shall have a label attached identifying the digital contents of the CD in accordance with Exhibit (thermal printed CD are acceptable). In addition to the packaging requirements in D-2, all CD media shall be packaged in standard single CD jewel cases (5-5/8" x 4-15/16" x 3/8") with a clear front cover. The CD label should be readable without opening the case or removing the CD from the case. "Slim" or other non-standard sized jewel cases will not be accepted.

EXHIBIT 1

PROJECT MAP

U.S. DEPARTMENT OF AGRICULTURE
AERIAL SURVEY
SOLICITATION NO: USDA-FS-13-07
ITEM 1: Tongass National Forest (Yakutat Ranger District), ALASKA
SCALE: 1:12,000
LENS: 6" (153mm)
FILM: Color Negative
PROJECT IDENTIFICATION CODE: 610070

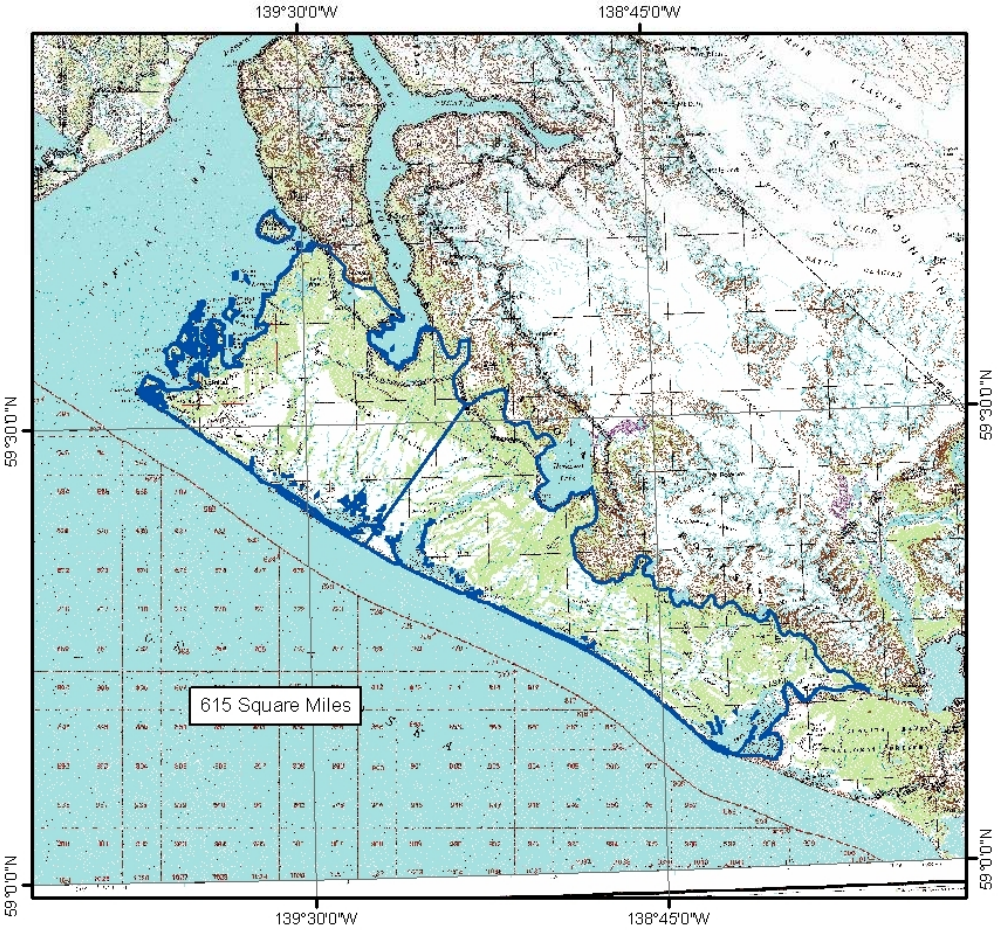


EXHIBIT 2

FILM CAN LABEL			
SOLICITATION NO. AND PROJECT ITEM NO. **USDA-FS-13-07, Item 1**			ROLL NO. **207**
STATE **ALASKA**	NOMINAL SCALE **1:12,000**	FILM TYPE **CN**	
LENS NO. **######**	CAMERA NO. **######**	CAMERA MAKE **Zeiss**	
CALIBRATED FOCAL LENGTH **153.000**	USGS REPORT NO. **OSL/####**	USGS REPORT DATE **30-MAY-06**	
PROJECT NAME	CODE	EXPOSURE NOS.	DATE EXPOSED
CONTRACTOR: USDA-FSA-AERIAL PHOTOGRAPHY FIELD OFFICE APFO-55 (2000)			

INSTRUCTIONS: PLEASE COMPLETE ALL BOXES THAT ARE APPLICABLE.

EXHIBIT 3

PROGRESS REPORT FORMAT

Syntax:

HEADER ITEMS:	field-name ":"[field-body][CRFL]
BODY ITEMS:	body item [CRFL]

Header Items:

All four header items are required to be submitted in each and every submittal.

DESCRIPTION	KEYWORD	FORMAT
Contractor Name	CONTRACTOR	Alphanumeric
Contract Award Number	CONTRACT	Numeric (N-YY)
Award Item	ITEM	Numeric (N)
Date Flown	DATE	Date (YYYYMMDD)

Body Items:

All data elements are required for each line of data submitted. Data elements are to be separated by 5 ASCII decimal 32 (white space). Acquisition and rejected exposure stations can be submitted as separate reports or as a combined report.

DESCRIPTION	KEYWORD	FORMAT
Latitude	N/A	DD.DDDDD
Longitude	N/A	-DDD.DDDDD
Status	N/A	Char(1)*

* Status Field:
A - Indicates the Exposure Station has been collected
R – Indicates the contractor has rejected a previously acquired Exposure Station

When an exposure station is rejected the exposure station will appear in a later report marked with an "R". Each report submitted should include only one status indicator for a particular exposure station.

PROGRESS REPORT CONVENTION (CON'T)

Sample:

```
CONTRACTOR:  Acme Photography
CONTRACT:  5-07
ITEM:  1
DATE:  09/30/2007

42.99972,-106.33611,A
42.99972,-106.34167,A
42.99972,-106.34722,A
```

Notes:
1) Text is case insensitive.
2) Header fields are not required to occur in any particular order.
3) Body items must occur after the headers.
4) Each header item must be on a single line (no "folding").
5) Keywords may not contain spaces and must be followed immediately by a colon.
6) The header items and body items may be separated by a NULL line (a blank line with a carriage-return/line-feed (CRFL)(ASCII 13 and 10).
7) Body items can only contain one x,y data pair per line and must be terminated by a carriage-return/ line-feed.
8) Contract number must be transmitted without the prefix (i.e., USDA-FS-5-07 should be sent as 5-07).
9) Date must be transmitted as MM/DD/YYYY.
10) Latitude and longitude must be expressed in decimal degrees and separated by a comma.
11) No e-mail attachments.

EXHIBIT 5

WAGE DETERMINATION

REGISTER OF WAGE DETERMINATIONS UNDER
THE SERVICE CONTRACT ACT
By direction of the Secretary of Labor

William W. Gross
Director

Division of
Wage Determinations

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON, D.C. 20210

Wage Determination No.: 1995-0222
Revision No.: 20
Date of Last Revision: 05/24/2006

Nationwide: Applicable in the continental U.S. Alaska, Puerto Rico, Hawaii and Virgin Islands.

** Fringe Benefits Required Follow the Occupational Listing **

Employed on U.S. Government contracts for aerial photograher, aerial seeding, aerial spraying, transportation of personnel and cargo, fire reconnaissance, administrative flying, fire detection, air taxi mail service, and other flying services.

CODE	OCCUPATION TITLE	MINIMUM WAGE RATE
	Aerial Photographer	11.39
	First Officer (Co-Pilot)	20.77
31010	Airplane Pilot	22.81

EXCEPT SCHEDULED AIRLINE TRANSPORTATION AND LARGE MULTI-ENGINE AIRCRAFT SUCH AS THE B-727, DC-8, AND THE DC-9.

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: $3.01 per hour or $120.40 per week or $521.73 per month

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 5 years, and 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

VACATION (Hawaii): 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 10 years, and 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HEALTH & WELFARE (Hawaii): $1.32 per hour, or $52.80 per week, or $228.80 per month hour for all employees on whose behalf the contractor provides health care benefits pursuant to the Hawaii prepaid Health Care Act. For those employees who are not receiving health care benefits mandated by the Hawaii prepaid Health Care Act, the new health and welfare benefit rate will be $3.01 per hour.

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization,

EXHIBIT 5

WAGE DETERMINATION

modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

** UNIFORM ALLOWANCE **

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of $3.35 per week (or $.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

** NOTES APPLYING TO THIS WAGE DETERMINATION **

Under the policy and guidance contained in All Agency Memorandum No. 159, the Wage and Hour Division does not recognize, for section 4(c) purposes, prospective wage rates and fringe benefit provisions that are effective only upon such contingencies as "approval of Wage and Hour, issuance of a wage determination, incorporation of the wage determination in the contract, adjusting the contract price, etc." (The relevant CBA section) in the collective bargaining agreement between (the parties) contains contingency language that Wage and Hour does not recognize as reflecting "arm's length negotiation" under section 4(c) of the Act and 29 C.F.R. 5.11(a) of the regulations. This wage determination therefore reflects the actual CBA wage rates and fringe benefits paid under the predecessor contract.

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444 (SF 1444)}

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e.,

EXHIBIT 5

WAGE DETERMINATION

appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).

2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

** OCCUPATIONS NOT INCLUDED IN THE SCA DIRECTORY OF OCCUPATIONS **

Aerial Photographer

The aerial photographer must be skilled in reading flight maps, capable of assisting the pilot to adhere to flight lines, be able to level and operate a cartographic camera and its auxiliary equipment mounted in the aircraft so that the photographs that are taken will have the required forward lap and side lap for use in photogrammetric mapping equipment, and possess a working knowledge of aerial films and camera filters to insure proper exposure of the films.

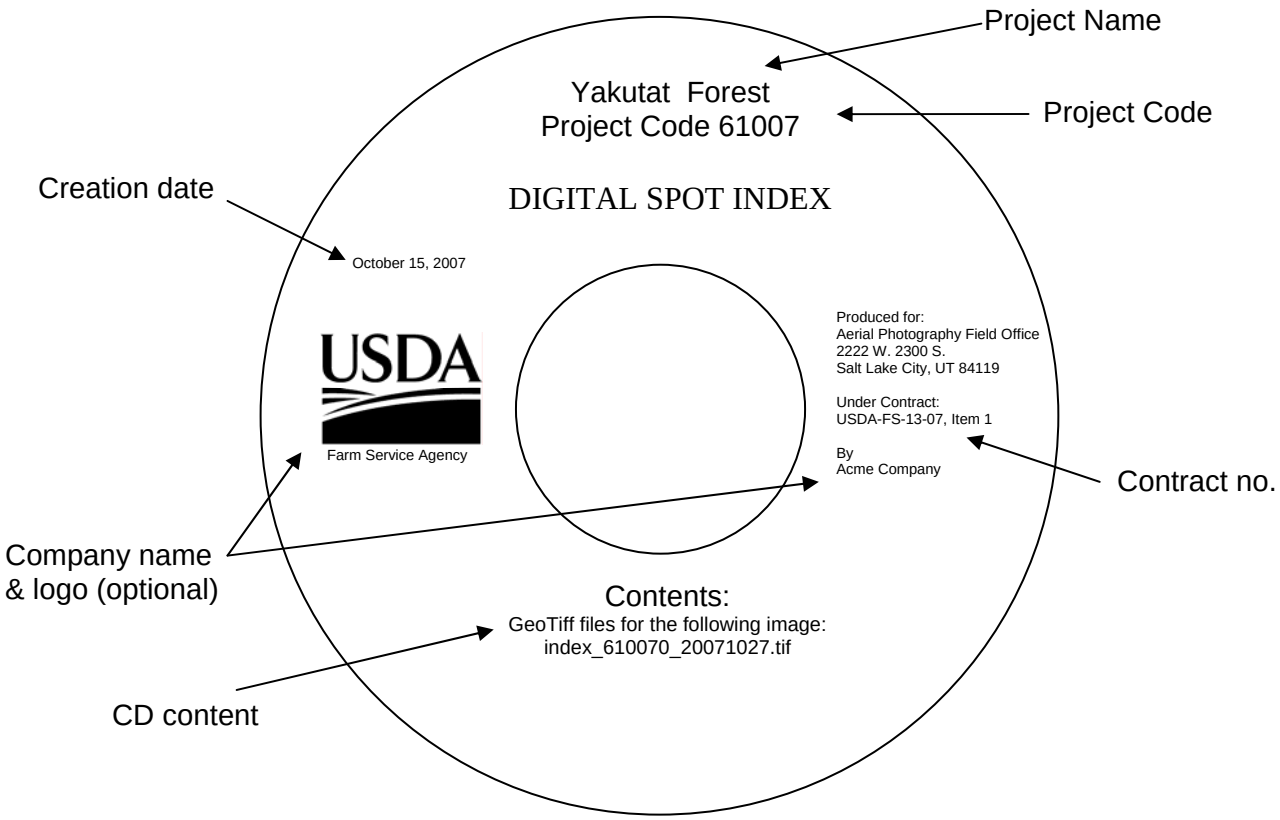
First Officer (Co-Pilot)

Is second in command of commercial airplane and its crew while transporting passengers, mail, or other cargo on scheduled or nonscheduled flights. Assists or relieves an airline captain in operating the controls of an airplane; monitoring flight and engine instruments; and maintaining air-to-ground communications.

EXHIBIT 6

Figure 1

CD-ROM LABELING REQUIREMENTS

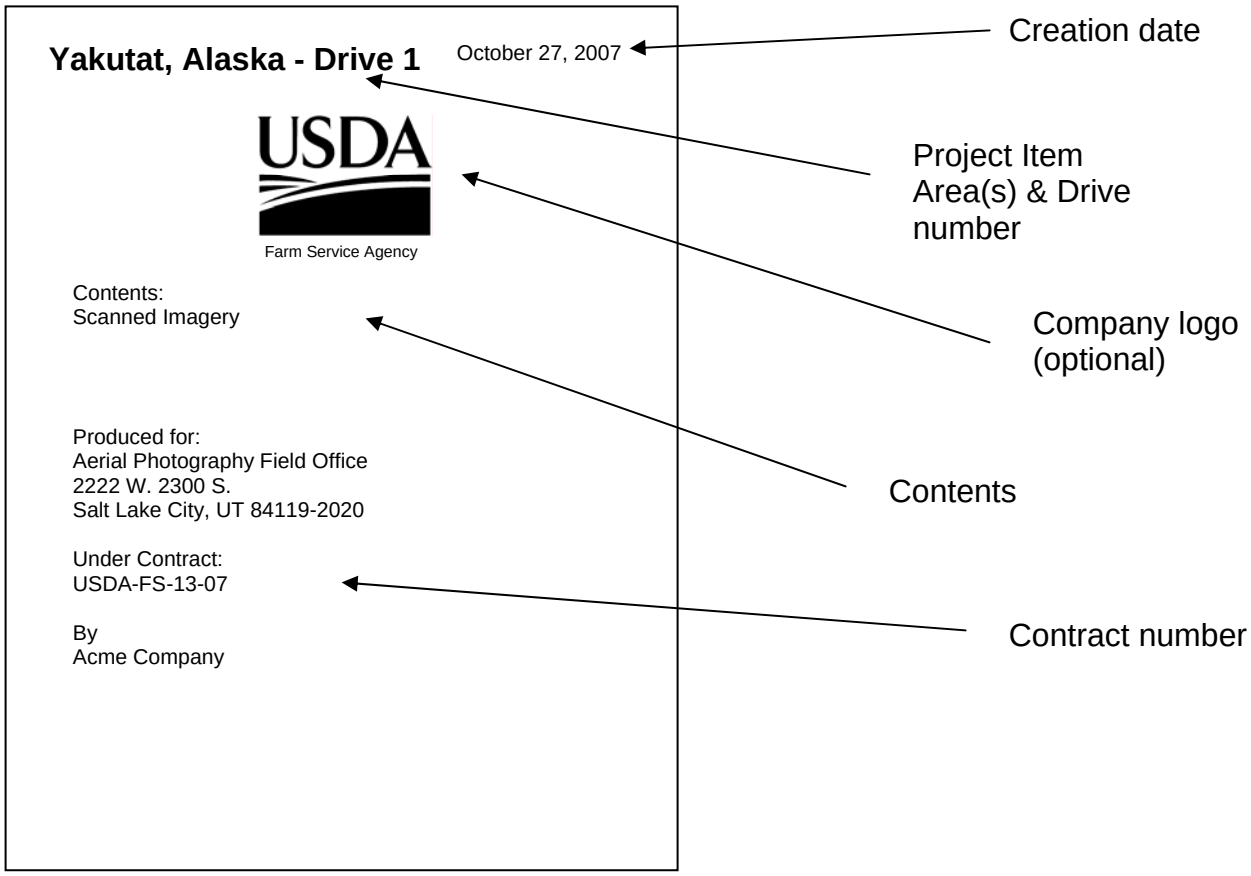


ELEMENT	EXAMPLE
CD content	GeoTIFF files for the following image: index_610070_20071027.tif
Company name & logo	Acme Company
Contract number	USDA-FS-13-07, Item 1
Creation date	October 27, 2007
Project Name & code	Yakutat Forest Project Code 610070

EXHIBIT 6

Figure 2

External Hard Drive Labeling Requirements



ELEMENT	EXAMPLE
Company name & logo	Acme Company
Contents	Scanned Imagery
Contract number	USDA-FS-13-07-
Creation date	October 27, 2007
Project item area & drive number	Yakutat, Alaska – Drive 1

Approximate label dimensions: 3-1/2” (width) x 4-1/2” (height)

EXHIBIT 7

GLOSSARY AND DEFINITIONS

Camera System: The combination of lens, cone, magazine(s), and camera filter(s) which have been calibrated as an integral unit.

Contracting Officer's Technical Representative (COTR): A person assigned to a contract who has the responsibility of providing technical information such as site ground and weather conditions.

Contracting Officer's Representative (COR): A person assigned to a contract who is responsible for specific technical and administrative duties related to that contract.

Exposure Stations: Pre-determined locations, annotated by USDA on the flight map, where photo centers of individual frames are to be exposed.

Film Titling: Information annotated on the original aerial film pertaining to project and exposure identification.

Line Item: A separable area or unit within a project item that has separate linear miles. All line items within a project item shall be awarded to only one offeror.

Original Photography: All aerial photography, as secured by the Contractor, prior to its inspection by the USDA, including any reflights made at the discretion of the Contractor.

Project Item: An area or areas described in the Schedule for which award shall be made to one offeror.

Reflight Photography: Photography reflown to replace original photography rejected by USDA.

Remake Materials: Any contract materials, other than the original aerial film, ordered remade by USDA.

Stereomodel: The area covered by the conjugate images of three successive overlapping exposures.

APFO: Aerial Photography Field Office.

FSA: Farm Service Agency.

FS: Forest Service.

NRCS: Natural Resource Conservation Service.

USDA: United States Department of Agriculture.

USGS: United States Geological Survey.

ATTACHMENT A

USDA AERIAL CAMERA SPECIFICATIONS

1. PRECISION AERIAL MAPPING CAMERA

Tested and calibrated aerial cameras for taking aerial photographs are required. Camera systems must be compatible with precision stereoscopic mapping instruments and with analytical mensuration procedures used in photogrammetric surveys and in preparing accurate topographic maps.

1.1 Camera System "Report of Calibration"

One copy of the "Report of Calibration" from the U.S. Geological Survey, for any camera system to be used, is required to be either on file at the USDA, or submitted with the contractor's offer. A camera system "Report of Calibration" will not be acceptable if more than three (3) years old at the scheduled date for receipt of offers.

1.2 Calibration Tests

Tests to determine compliance with these specifications will be performed by the Optical Science Laboratory of the U.S. Geological Survey. The fee for the tests and the arrangements to have the tests performed are the responsibility of the contractor. Delays encountered in having camera systems tested by the USGS Optical Science Laboratory will not be considered reason for the USDA to accept offers lacking such reports. Each camera system submitted for calibration shall be accompanied by all magazines and filters that might be used with the camera. Controls and camera mounts should not be submitted unless requested by the calibrating laboratory. Instructions for operation of the camera, including directions for holding the shutter open for laboratory tests, shall accompany each camera unless ascertained to be on file with the calibrating laboratory.

1.21 Interval Between Tests

The interval between tests for camera system calibrations shall not exceed three (3) years, unless otherwise approved by the Contracting Officer. However, when there is any reason to believe that the dimensional relationship of the lens, fiducial marks, and film plane have been disturbed by partial disassembly or unusual mechanical shock, the camera must be submitted for recalibration at contractor expense.

1.22 Contact for Calibration Tests

U.S. Geological Survey
National Mapping Division
560 National Center
Reston, Virginia 20192
Attention: Chief, Optical Science Laboratory
Phone: (703) 648-4692

1.23 Shipping Address for Calibration Tests

U.S. Geological Survey
12201 Sunrise Valley Drive
Reston, Virginia 20192
Attention: Frank MacCue (703) 648-4692

1.3 Constructional Design Necessary to Permit Testing

To permit testing for determination of calibrated focal length, distortion, resolving power, fiducial mark locations, and stereomodel flatness, the constructional design of the camera shall be as follows:

1.31 Focal Plane

The focal plane shall be accessible from the rear so that a telescope placed behind the camera may view objects in front of the lens, limited only by the size of the focal plane opening. It shall be possible to place the surface of an optical flat having a thickness of 31 mm (1 1/4 in.) on the focal plane of the camera.

1.32 Focal Plane Frame

The focal plane frame shall be so constructed as to permit placement of a glass photographic plate on its surface so that the emulsion surface of the glass photographic plate lies in the true focal plane of the camera. The size of the frame image shall be 23 x 23 cm (9 x 9 inches).

1.4 Camera Components Required for Testing

1.41 Lens Cone Assembly

The lens cone assembly must be so constructed that the lens and fiducial marks comprise an integral unit. The design of the lens cone shall be such that it maintains the required precise relationship between the lens, fiducial marks, and focal plane on which the film platen shall be positioned. Construction shall be such as to maintain the dimensional relationship of these components under normal conditions of transportation, handling, and use, which can include considerable mechanical and thermal shock. The structure holding these components shall be supported in use in such a manner that stresses likely to change the required dimensional relationships cannot be transmitted to it from the supporting body or mount. The lens cone assembly shall be so designed and manufactured that all parts will return precisely to their original positions, should it be necessary for any reason to disassemble it. However, any disassembly of the lens cone assembly shall require recalibration at contractor's expense before further use.

1.42 Film Platen

Cameras shall be equipped with an approved means of flattening the film at the instant of exposure. The platen against which the film is held shall not depart by more than ± 0.013 mm from a true plane, when the camera/magazine vacuum is applied.

1.43 Shutter

The camera shall be equipped with a between-the-lens shutter of the variable-speed type. The range of speed settings shall be such that, for all anticipated combinations of flight heights, aircraft speeds, film speeds, and light conditions, the camera will produce high-resolution photographs. The effective exposure time and efficiency of the shutter as mounted in the camera will be measured at a maximum aperture and shall have a minimum efficiency of 70 percent at a speed of 1/200 second. This test shall be made in accordance with the "American National Standard Shutter Tests for Still-Picture Cameras," Method I, approved January 12, 1972, American national Standards Institute (PH3.48-1972) (R1978). The shutter shall have a speed of 1/400 second and slower for exposing film negatives during calibration.

1.44 Fiducial Marks

Either four or eight fiducial marks are required. If the four fiducial marks are in the corners of the format area, there must be a set of marks (V-notches or equivalent) in the frame at the midsides for use in centering diapositives in a stereoplotter. If there are eight fiducial marks, the corner fiducial marks shall form a quadrilateral whose sides are equal within ±0.500 mm. The midside fiducial marks shall be equidistant within ±0.500 mm from the adjacent corner fiducial marks. All fiducial marks and other marks intended for precise measuring shall be clear and well-defined on the aerial film and shall be of such a form and contrast that the standard deviation of repeated reading of the coordinates of each made on a precision comparator shall not exceed 0.002 mm. For cameras with projection type fiducial marks the projected images of all marks must be in sharp focus on the emulsion surface. Drawings in figure 1 show acceptable fiducial marks and their arrangements. Fiducials without a center point mark or intersecting lines will not be acceptable. Glass or plastic mounts for fiducial marks will not be acceptable.

1.441 The lines joining opposite pairs of fiducial markers shall intersect at an angle within one minute of 90 degrees. (See figure 2.)

1.442 The intersection of lines between fiducials--the indicated principal point--shall not be further than 0.030 mm from the point of autocollimation. (See figure 2.)

1.45 Filter

Only glass filters with metallic antivignetting coating shall be used to reduce the illumination for uniform distribution of light over the focal plane format. A microdensitometer trace will be made from the antivignetting coating side of the filter to determine if any deterioration is present that would affect the uniformity of illumination in the focal plane. Deteriorations in excess of 50% of the height of the nominal curve for a lease type will be reason for rejection of a filter. The surface with the antivignetting coating shall be toward the camera lens. The filter shall have surfaces parallel within 10 seconds of arc, and its optical quality shall be such that its addition to the camera shall enhance the uniformity of focal plane illumination and not cause a reduction in image resolution. Glass filter combinations which may be required will be specified in Section B.

1.5 Lens and Platen/Magazine Identification

The camera or lens number, and the most recent calibrated focal length shall be recorded clearly on the film for each frame either on the inside of the focal plane frame or on a data strip between frames. An alpha numeric mark (or symbol) contained in the platen/magazine which identifies the platen/magazine may also be recorded if available on each frame of film. Data markers located on the inside of the focal plane frame shall not exceed 6.35 mm (0.25 inch) in height and 25.4 mm (1.0 inch) in length and shall not obscure any part of the fiducial marks.

1.6 Optical Requirements

Cameras will be given both a static and an operational type test made after final assembly of all parts of the camera system with the light filter in place on the lens. All tests of the lens cone assembly for determination of the calibration constants, calibrated focal length, distortion and resolution will be made using high contrast targets and Eastman Kodak Spectroscopic emulsion Type 157-01 on Kodak Aerial Calibration Plates. Cameras will be operationally tested for stereomodel flatness and resolution by exposing Eastman Kodak Double-X Aerographic film 2405 in the camera while mounted on a multicollimator camera calibrator. (The optical requirements for distortion, model flatness, and resolution for various focal length cameras are defined and tabulated in table 1.) The camera focal length stated in Section B must meet the minimum requirements for that focal length as shown in table 1.

1.61 Distortion

1.611 Radial

The distortion in image position as measured along radial lines from the principal point of symmetry. The value of the average radial distortion referred to the calibrated focal length shall not exceed the amount shown in table 1.

1.612 Decentering

The distortion in image position as measured perpendicular to radial lines from the principal point of symmetry. The value of the decentering distortion shall not exceed the amount shown in table 1. This value shall be evaluated for 153 mm cameras only.

1.62 Point of Symmetry

The calibrated principal point — the point of symmetry — shall not be further than 0.020 mm from the point of autocollimation for 153 mm focal length lenses and no further than 0.040 mm for all other focal length lenses. (See figure 2 / table 1.)

1.63 Resolution

Radial and tangential resolving power, in line pairs per millimeter, shall be no less than the value listed in table 1 for each focal length lens.

1.64 Test Aperture

All camera-lens calibration tests shall be made at the maximum aperture specified by the manufacturer for that lens.

1.65 Model Flatness

The model flatness test will be performed only for 153 mm and 88 mm cameras. Diapositives will be printed from two film exposures of the collimator targets on micro flat glass plates. Two stereomodels will be analytically formed from these using different halves of the exposures for each model. Each model thus formed will consist of a small fixed number of symmetrically arranged points. The allowable deviation from flatness, taken as the range between the maximum negative and the maximum positive value shall be no greater than ± 1/8000 of the focal length of a nominal 6-inch (153-mm) camera, or ± 1/5000 of the focal length of a nominal 3 1/2-inch (85-88 mm) camera. If elevation discrepancies exceed this value, the camera will not be acceptable. (See table 1.)

Figure 1
EXAMPLES OF ACCEPTABLE FORMS OF FIDUCIAL MARKS

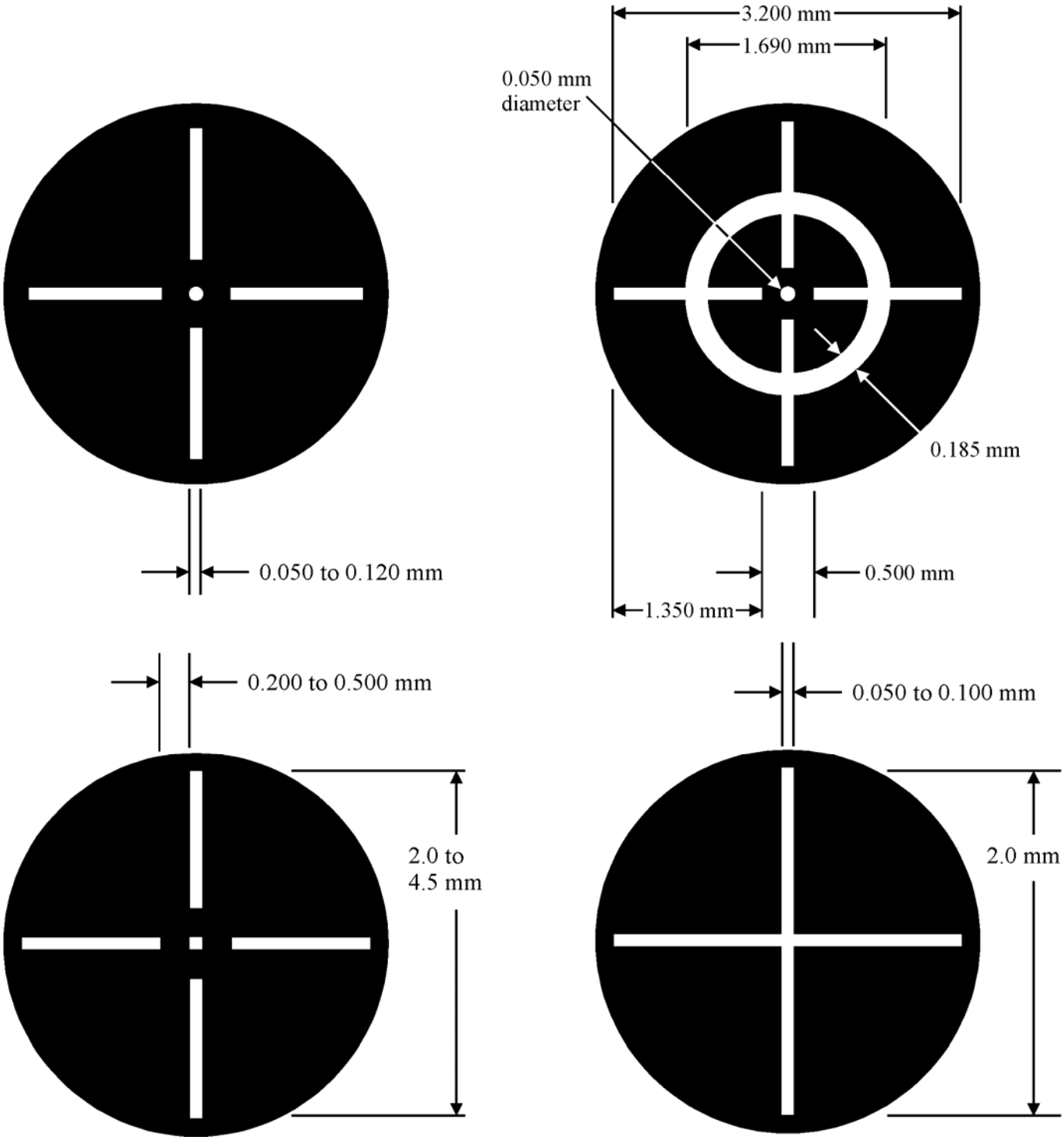
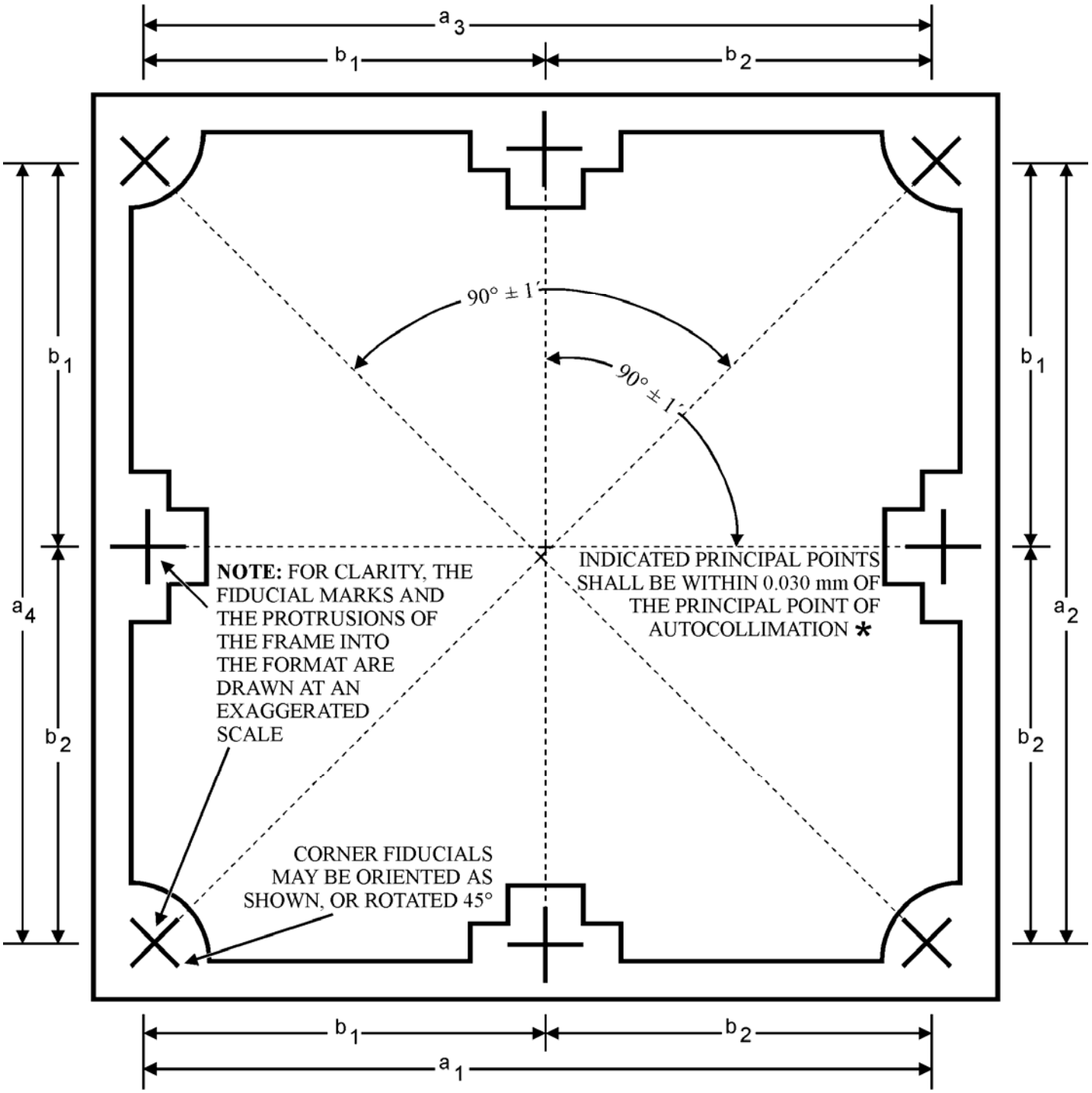


Figure 2
ARRANGEMENT OF FIDUCIAL MARKS



$a_1 = a_2 = a_3 = a_4$ (within 0.500 mm)

$b_1 = b_2$ (±0.500 mm)

* THE CALIBRATED PRINCIPAL POINT - THE POINT OF SYMMETRY - SHALL BE WITHIN 0.015 mm OF THE PRINCIPAL POINT OF AUTOCOLLIMATION FOR 153 mm LENSES AND 0.030 mm FOR ALL OTHER FOCAL LENGTH LENSES.

LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

Exhibit	Description	Page
Exhibit 1	Project Map	23
Exhibit 2	Film Can Label (1 page).	24
Exhibit 3	Progress Report (2 pages).	25-29
Exhibit 4	Wage Determination: Nationwide: Number 1995-0222, Revision 20, Dated May 24, 2006 (3 pages).	30-32
Exhibit 5	Media Labeling Requirements (2 page).	33-34
Exhibit 6	Glossary and Definitions (1 page).	35
Attachment A	USDA Aerial Camera Specifications (9 pages).	

USDA OPTICAL REQUIREMENTS

Table 1

TABULATION OF OPTICAL REQUIREMENTS

Focal Length	88mm	153mm	210mm	305mm
Focal Length Within	± 4mm	± 3mm	± 4mm	± 5mm
Useable Angular Field	120°	90°	70°	50°
Field Angle-From Axis out to:	54.5^o	40°	30°	22.7^o
DISTORTION - At Maximum Aperture				
Radial Distortion - Tolerance (um)	± 15	± 10	± 20	± 20
Decentering Distortion - Tolerance (um)	-	$\leq$ 8	-	-
MODEL FLATNESS - (um) Total Difference	± 17	± 19	-	-

INDICATED PRINCIPAL POINTS (Fiducial Centers)

The indicated principal points - fiducial centers - shall fall within a 0.040mm radius circle around the principal point of autocollimation.

CALIBRATED PRINCIPAL POINT (Point of Symmetry)

The calibrated principal point - point of symmetry - shall fall within a 0.020mm radius circle around the principal point of autocollimation for 153mm focal length lenses and 0.040mm for all others.

RESOLUTION
Measured on Spectroscopic Plate at Maximum Aperture

Minimum Radial & Tangential Resolution in Line Pairs per mm
LENS HALF ANGLE

Lens		0°	7.5°	15°	22.7°	30°	35°	40°	45°	50°	54.5°
86mm	Wild Super Aviogon II Zeiss S-Pleogon A or equivalent	59	59	49	42	35	30	17	14	12	12
153mm	Wild U. Aviogon Zeiss Pleogon A Jena Lamegon Pl or equivalent	57	57	48	48	40	34	14			
210mm	Wild N-Aviogon II Zeiss Topargon or equivalent	49	49	42	35	29					
305mm	Wild N. Aviotar Zeiss Topar or equivalent	48	48	28	24						