

**PALM BEACH COUNTY
BOARD of COUNTY COMMISSIONERS**

AGENDA ITEM SUMMARY

Meeting Date: 1/15/08	<input checked="" type="checkbox"/> Consent	<input type="checkbox"/> Regular
	<input type="checkbox"/> Ordinance	<input type="checkbox"/> Public Hearing

Department Submitted by:	Information Systems Services
Submitted for:	Countywide GIS

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends a motion to:

- A) Receive and file** Task Order No. 1 to Contract (R2006-2517) with BAE Systems / NSS for a not to exceed amount of \$94,425 for coastal aerial photography; and,
- B) Approve** Task Order No. 2 with BAE Systems / NSS to complete color digital ortho photography for a not to exceed total amount of \$165,000.

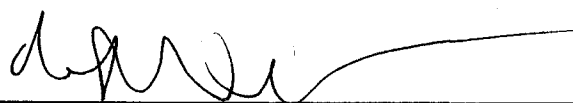
Summary: Three firms were selected using the Consultant Competitive Negotiations Act (CCNA) process. BAE Systems / NSS, Surdex Corporation and Woolpert, Inc. were contracted on November 21, 2006 to perform digital ortho photography and planimetric mapping for the County (R2006-2516, R2006-2517, and R2006-2518). Task Order No. 1 with BAE Systems / NSS provided environmental aerial photography for Palm Beach County coasts and inlets for Environmental Resource Management (ERM). This Task Order was under \$100,000 and was previously executed; and therefore, it is being submitted for receive and file purposes. Funding for Task Order 1 for a total amount of \$94,425 was provided by ERM based on the Budget Availability Statement provided. Due to weather delays in obtaining the aerial photography, a ninety day extension is required to take delivery of the product, perform quality assurance on the deliverable and make final payment on the Task Order. Task Order No. 2 with BAE Systems / NSS is to provide color orthophotos for the entire County. Funding for Task Order No. 2 is allocated in the GIS Capital Account. The proposed Task Order is recommended by the GIS Policy Advisory Committee. Countywide (PK)

Background and Justification: In June, 2006, contracts were established with BAE Systems National Security Systems Inc., Surdex Corporation, and Woolpert, Inc. to provide mapping services. Digital ortho photography provides aerial photos rectified to match the earth's surface location. All Task Orders in excess of \$100,000 require Board approval.

Attachments:

- 1. BAE Systems / NSS Task Order No. 1 with Budget Availability Statement from ERM
- 2. Two originals Task Order No. 2 for BAE Systems / NSS

Recommended by: <i>Steve Bordelon</i>	1/7/2008
Department Director	Date

Approved by: 	1/9/08
County Administrator	Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact

Fiscal Years	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Capital Expenditures	\$ 259,425	0	0	0	0
Operating Costs	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Inc (County)	0	0	0	0	0
In-Kind Match (County)	0	0	0	0	0
NET FISCAL IMPACT	\$ 259,425	\$ 0	\$ 0	\$ 0	\$ 0

Additional FTE Positions (Cumulative) 0 0 0 0 0

Is Item Included in Current Budget Yes X No

Budget Account Number(s):
 Fund 3652 Dept 381 Unit M100 Obj 3120 \$ 94,425
 3901 491 M010 6508 \$ 165,000

B. Recommended Sources of Funds / Summary of Fiscal Impact

BAE Systems Task Orders
 Task Order #1 \$ 94,425 (from Env. Res. Mgmt. Coastal Aerial Project)
 Task Order #2 \$165,000
 Total \$259,425

C. Department Fiscal Review: Susan Fehner Leslie 12/27/07

III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Administration Comments:

Jan Paul 1-4-08 Jan J. J... 11/7/08
 OFMB Contract Administration
 Actw 1.3.08 11/2/08

B. Legal Sufficiency:

This item complies with current County policies.

Paul F. J. 11/7/08
 Assistant County Attorney

C. Other Department Review:

 Department Director

TASK ORDER

TASK ORDER # 1

CONSULTANT **BAE Systems**

ACCOUNT # **3652-381-M100-3120**

CONTRACT **R2006-2517**

COUNTY PROJECT MANAGER **Kelly Ratchinsky** PHONE **355-4275**

PROJECT NAME **2007 Countywide Coastal Aerial Project**

LOCATION **Palm Beach County coasts and inlets**

TASK DESCRIPTION

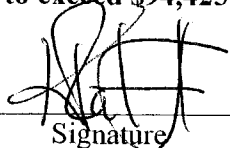
Color Digital Orthophotos .5' Resolution per attached specifications.

DELIVERABLES +/- **See Attached** DUE DATE **August 31, 2007**

TASK ORDER TYPE **Lump Sum** RETAINAGE **10%**

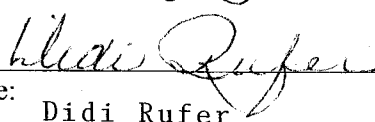
TOTAL AMOUNT **Not to exceed \$94,425**

PROJECT MANAGER


Signature

DATE 5/16/07

CONSULTANT
Printed Name/Title:

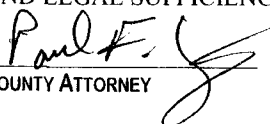

Didi Rufer
Manager Contracts II

DATE 5-14-07


PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS


Steve Bordelon, Director of ISS

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY


COUNTY ATTORNEY

APPROVED AS TO
TERMS AND CONDITIONS


ISS DEPARTMENT DIRECTOR

ATT. # 1

Palm Beach County

Florida

Environmental Aerial Photography Acquisition

For

Palm Beach County Coasts & Inlets

Scope of Work

April 26, 2007

Provided by BAE SYSTEMS

BAE SYSTEMS



April 26, 2007

Mr. Kelly Ratchinsky
Countywide GIS Coordinator
Palm Beach County ISS
2300 N. Jog Road, 4th Floor
West Palm Beach, FL 33411

Reference: Environmental Aerial Photography Acquisition For Palm Beach County Coasts & Inlets

Dear Mr. Ratchinsky,

BAE SYSTEMS is pleased to submit this proposal for Color Digital Orthophotography and related services for the entirety of the Palm Beach County Coastline located in Palm Beach County, Florida, from the Martin County line to the Broward County line. The coastal and nearshore coverage includes all inlets as follows:

- Jupiter Inlet – West to Alternate A1A
- Lake Worth Inlet – West to the Port of Palm Beach
- South Lake Worth Inlet – West to the Boynton boat ramp
- Boca Raton Inlet – West to Palmetto Park Road

Coastal coverages, at a minimum, will match the imagery provided by prior contractors for 2004 and 2005 and will include no less than 2,000' from shore and land mass sufficient for aerial triangulation and orthorectification of the photographs. Relative to the flight conditions described in Paragraph 3 of the County's Technical Specifications, approximately 1/3 of the photo frame will be land mass and 2/3 ocean.

All of the products and services described below will be completed under the direct supervision of certified photogrammetrists, licensed surveyors and other geospatial professionals and will meet or exceed the standards and specifications for Palm Beach County.

SCOPE OF SERVICES

Project Management

Ms. Sandy Elfreth-Howery will be your overall project manager for this project. She will be BAE SYSTEMS primary point of contact and will have overall management responsibility. Ms. Elfreth-Howery will produce and distribute all status reports and should be used as the central point for communication. Ms. Elfreth-Howery will prepare Palm Beach County Contract Management a written report to track the status of production and to note milestones and/or issues that require resolution. BAE SYSTEMS will also prepare and submit monthly invoices.

Aerial Photography

BAE SYSTEMS will acquire new color aerial photography for this project only on days when conditions are considered optimal for collection of aerial photography. Other factors during aerial photography acquisition include:

- Sun angle is between 15 degrees and 35 degrees from the horizon
- Flown on a rising tide, at least 2 hours after low tide and no later than 1 hour after high tide to ensure clear water inside the inlets

- Calm seas and clear water are essential for acceptable images
- Acquisition area is free of haze, smoke and/or fog
- Conditions are considered cloud-free
- Tilt shall not exceed 5 degrees for any one photography or 2 degrees for any 10 or more photographs in a line or one degree for the entire project.
- Crab shall not exceed 10 degrees as measured from the flight line, as indicated, by two or more consecutive photographs.

This new aerial photography will be flown at 3600' AMT. The negative scale of the aerial photography is 1" = 600', with 80% forward overlap and 30% sidelap. There will be a total of (10) flight lines with (551) exposures.

BAE SYSTEMS will provide PBC sample contact prints to approve all photography prior to orthorectification. We will furnish aerial film of a quality that is equal or superior to Kodak color 2444 negative film.

Ground Control Surveys & Targeting

We will incorporate the most recent aerotriangulation block, to be provided by PBC, in place of running our own control network. We understand that PBC will approve this method toward meeting the NMAS 1" = 100' standards. No other control should be necessary to attain the specified accuracy requirements. Offshore control is not required.

Coordinate Reference Frame

Survey Datum – NAD 83/90 (feet) Horizontal; NAVD 88 - Vertical

Scanning

BAE SYSTEMS fully recognizes the technical performance required in the conversion of analog aerial film to a digital form during scanning. Since all subsequent processing steps build upon the scanned imagery base, we maintain close control over the processing and quality of this digital imagery. We will scan directly from the film rolls into positive image files at a resolution of 14 microns or better.

Scanning will be performed at a 12-bit resolution in order to enhance feature detail, with special emphasis on the subsurface areas.

Analytical Triangulation

BAE SYSTEMS will use the most recent triangulation data to be provided by Palm Beach County. This will be used to obtain as many tie points as possible to control the new photography to a block that already exceeds NMAS and thereby eliminate the need for new ground control.

BAE SYSTEMS understands that PBC expects the analytical triangulation solution will support the required accuracy for this project (1" = 100' NMAS). We will perform Softcopy analytical triangulation to extend and densify the ground control survey points, and establish orientation parameters for each scanned image. Softcopy analytical triangulation is an entirely digital process using scanned images of the film negatives. Our softcopy workstations support sub-pixel accuracy and will be utilized for both compilation and orientation measurement. The results will be checked

to make certain that they conform to National Map Accuracy Standards with respect to scale and RMSE.

DEM

PBC will provide the surface model necessary for orthorectification. We will be responsible for verifying the completeness and supplementing the collection, where required.

Digital Orthophotography

Digital orthorectification will include a spatial and radiometric transformation of the scanned image from line / sample space into the specified ground coordinate system. Inputs into the orthorectification process are the scanned image, the interior and exterior orientation parameters for each image, corrections for lens distortion, earth curvature & atmospheric refraction, camera calibration information, and the Digital Elevation Model (DEM). In the process, each pixel in the scanned image is geometrically transformed from a line/sample value to a geographic location. The interior and exterior orientation parameters are used to project each pixel into the ground coordinate system, while the DEM is used to correct for relief displacement.

In order to better reveal subsurface features, a gamma stretch will be used. Color and tone will be defined during the Pilot phase of this project. The final output will be at both a 0.5' GPR and 1' GPR.

BAE SYSTEMS will provide the raw digital orthorectified imagery for each frame of photography. This will give PBC the opportunity to scrutinize image detail after it has been orthorectified, but before the images were mosaicked, cleaned up, color balanced, or feathered along cut lines. These will be at .5' GPR and delivered on DVD's with .tfw and .tif files.

Every frame of the 80% forward overlap photography will be utilized for this project to ensure that most of the final orthophotography imagery will be as close as possible to nadir in the direction of flight. This will result in less building lean, less subsurface displacement from water refraction, and less surface reflection from sunlight.

Using this approach, BAE SYSTEMS highly skilled and experienced staff will produce and deliver color digital orthophotos at a 0.5' pixel resolution. Once the images are ortho-rectified, they are checked for geometric accuracy, image quality, and tone balancing.

The final .5' pixel color digital orthophotography will be a seamless database of imagery delivered in section format to Palm Beach County. Achieving this goal requires that the tone of the imagery be matched for consistency, and that the individual overlapping orthophotos be mosaicked together. Imagery along adjacent tile edges will not be displaced by more than one pixel.

Quality Control

BAE SYSTEMS sought and achieved certification by the International Standards Organization (ISO) in 1998.

ISO standards are a series of internationally recognized Quality System requirements that encompass all areas of corporate organization. BAE SYSTEMS Quality Program is an extensive set of processes and tested procedures that ensure our clients receive the highest quality products and services. The following statements summarize our Program:

- BAE SYSTEMS is committed to providing products and services that will meet or exceed the expectations of our customers.
- BAE SYSTEMS will achieve the goals of our Quality Program through our total and continuous dedication to world-class quality in all stages and phases of our production cycle, from beginning to end.
- BAE SYSTEMS will implement our Quality Program via thorough training of our employees to ensure that they understand our external and internal customers, as well as project requirements and deadlines, and can apply the proper procedures needed to meet those requirements on time and without error, each and every time.
- Providing quality products and services is the responsibility of everyone at BAE SYSTEMS.

PBC will return comments to us within (15) days of receipt of imagery. We will respond to PBC's comments or concerns within (15) days, either making necessary corrections or providing clarification.

Delivery Items

- Original roll(s) of aerial film negatives (to be stored by BAE SYSTEMS)
- One copy of the Analytical Triangulation Report in digital and hardcopy format (will include the current camera calibration report)
- One copy of the Image Processing and Quality Control Report in digital and hardcopy format (will include the flight and film inspection report and statistical validation report)
- Two copies of the flight report signed by the pilot of the aerial photographer. The flight report will contain the flight, tide, and weather logs.
- Raw digital orthorectified imagery provided on DVD's with .tfw and .tif files produced at .5' GPR before they were mosaicked, cleaned up, or color balanced. We understand that they will only be used for PBC's internal purposes.
- (92) digital orthorectified tiles provided on CD-ROM's or on USB2 or firewire external hard drive with .tfw and .tif files produced at both .5' GPR and 1' GPR
- Digital imagery provided in MrSID format in 3 segments, and these 3 images will be created at 20x compression for the 1' GPR images
- Digital spot index map with all sheets numbered and referenced in .dwg and .shp format
- Digital photo mosaic index in MrSID format upon completion of the analytical triangulation
- Produce color raster plot files at 43" x 31.5" gross (42" x 30" neat image area) of each tile at 1" = 100' scale in EPS format on CD-ROM
- Federally compliant metadata in electronic format for each deliverable in item 6 bullet point above
- Updated DEM in uncompressed ArcInfo Generate if modified

Project Schedule

BAE SYSTEMS proposes to commence project mobilization upon Task Order approval. All deliverables will be sent to PBC ninety (90) days after completion of successful aerial photography. (Assuming May-August 2007). BAE SYSTEMS will submit a schedule for this project in Microsoft Project format (Gantt Chart) within (10) days after receipt of the Task Order.

The following is an approximate delivery schedule:

Contract Execution	May 2007
Aerial Photography, Scanning & Analytical Triangulation	May/June 2007
Digital Orthophotography & Project Completion	July/Aug. 2007

BAE SYSTEMS*Palm Beach County (Coastal Ortho Project) - Scope of Work***Total Project Costs**

New Aerial Photography	\$ 25,601
Project Management	\$ 4,122
Scanning	\$ 6,668
Analytical Triangulation	\$ 20,770
Digital Orthophotography	\$ 37,264
TOTAL	\$ 94,425

Payment Terms

We will utilize the payment terms that are already in place as per our existing contract with Palm Beach County.

Insurance Coverage

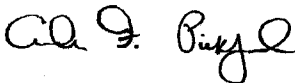
During the terms of any contract which might result from this proposal, BAE SYSTEMS will have in place the following types of insurance coverage: a) professional liability; b) statutory workman's compensation; c) valuable papers insurance; d) public liability protection; e) automobile insurance.

BAE SYSTEMS liability of any future claims relating to the services performed as part of this contract will be strictly limited to the total dollar value of the services specified within this proposal.

Thank you for the opportunity to submit this proposal. We look forward to working with you on this very important project. If you have any questions or comments concerning this proposal, please contact Andy Pickford at (800) 257-7960 (office), (215) 499-0983 (cell), or andrew.pickford@baesystems.com

Very Truly Yours,

BAE SYSTEMS



Andrew F. Pickford
Regional Manager

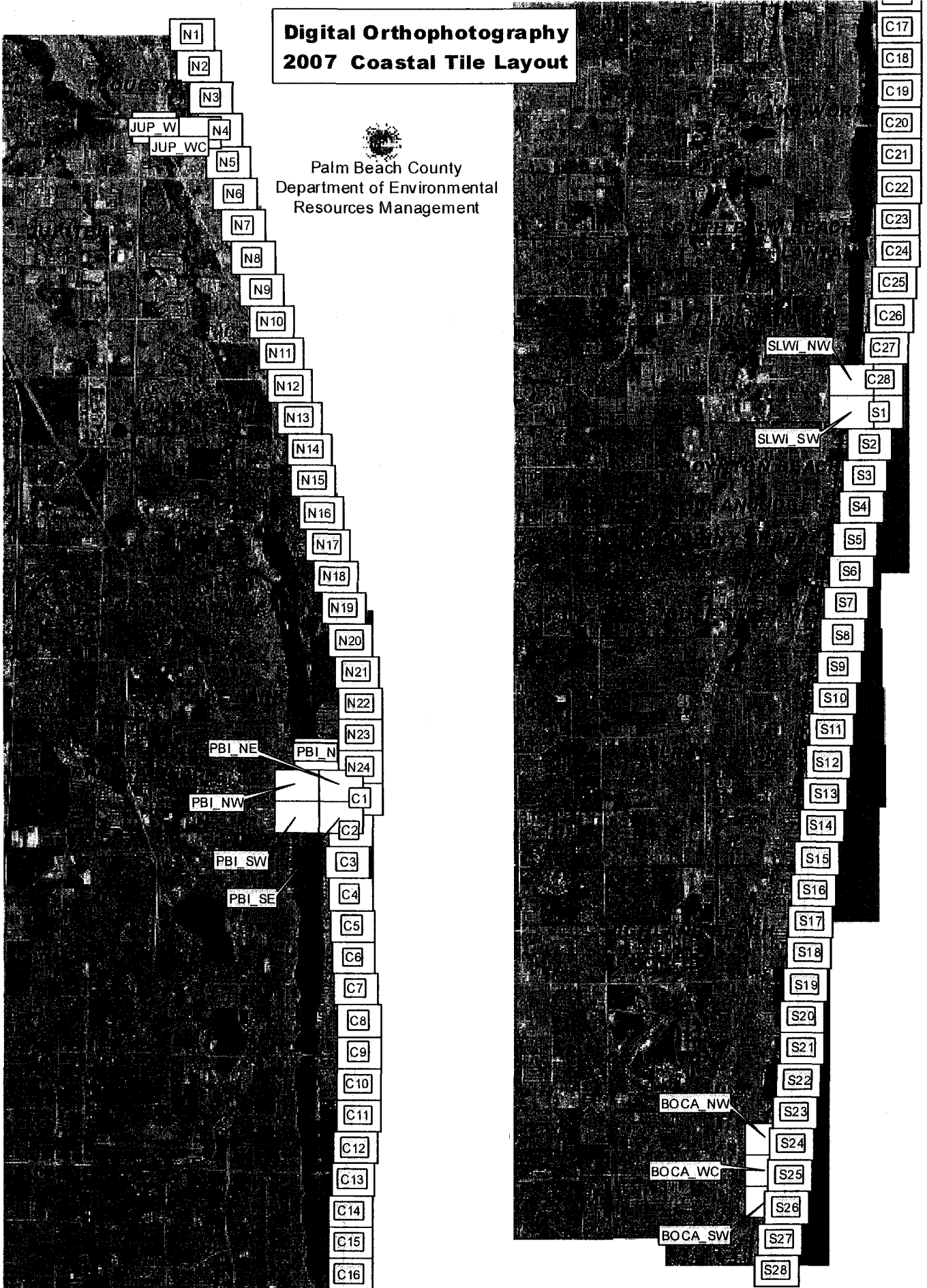


Didi Rufer
Manager Contracts II

Digital Orthophotography 2007 Coastal Tile Layout



Palm Beach County
Department of Environmental
Resources Management



BUDGET AVAILABILITY STATEMENT

REQUEST DATE: 04/26/07

REQUESTED BY: Janet Phipps

PHONE: 233-2513

PROJECT TITLE: Countywide Coastal Aerial Photography

LOCATION:

Project NO:

ORIGINAL CONTRACT AMOUNT:

BCC RESOLUTION#

REQUESTED AMOUNT: \$94,425.00

DATE:

CSA/LOA CHANGE ORDER AMOUNT:

CSA/LOA CHANGE ORDER NUMBER:

CONTRACTOR/CONSULTANT NAME: BAE SYSTEMS National Security Solutions

PROVIDE A BRIEF STATEMENT OF THE SCOPE OF SERVICES TO BE PROVIDED BY THE CONSULTANT/CONTRACTOR: As stated in the specs attached to the email from Kelly Ratchinsky on Monday, April 23, 2007.

WILL THIS AMENDMENT CHANGE THE ESTIMATED COST OF THE PROJECT?

IF YES, PROVIDE ESTIMATES OF THE NEW COSTS: No

CONSTRUCTION	_____	NA
ARCHITECTURE/ENGINEER	_____	NA
*STAFF COSTS	_____	NA
EQUIPMENT/OTHER	_____	NA
CONTINGENCY (10%)	_____	NA
TOTAL	_____	NA

*By signing this BAS your department agrees to these staff costs and your account will be charged upon receipt of this BAS by FD&O. Unless there is a change in the scope of work, no additional staff charges will be billed.

BUDGET ACCOUNT NUMBER (IF KNOWN):

FUND: 3652 **DEPART:** 381 **UNIT:** M100 **OBJ:** 3120 **SOBJ:** 02 **PROG:** **PG PERIOD:**

AD VALOREM OTHER FEDERAL

REVENUE:

ANTICIPATED DATE OF APPROVAL:

BAS APPROVED BY: Janet Phipps **DATE:** 5/1/07

REQUIREMENT: Invoice must be approved by ERM before submitting to ISS for payment.

TASK ORDER

TASK ORDER # 2

CONSULTANT **BAE Systems**

ACCOUNT # **3901-491-M010-6508**

CONTRACT **R2006-2517**

COUNTY PROJECT MANAGER **Kelly Ratchinsky** PHONE **681-3958**

PROJECT NAME **2008 Palm Beach Countywide Color Digital Orthophotos**

LOCATION **Palm Beach County**

TASK DESCRIPTION

Color Digital Orthophotos 1"=400' scale, 2 foot pixel resolution per attached specifications.

DELIVERABLES +/- **See Attached**

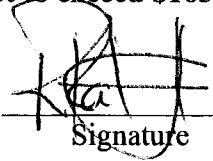
DUE DATE **August 31, 2008**

TASK ORDER TYPE **Lump Sum**

RETAINAGE **10%**

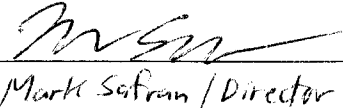
TOTAL AMOUNT **Not to exceed \$165,000**

PROJECT MANAGER


Signature

DATE 12/27/07

CONSULTANT

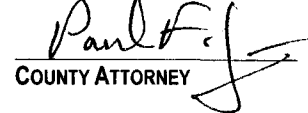

Printed Name/Title: Mark Safran / Director

DATE 12/21/07

**PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS**

Addie Greene, Chairperson

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY


COUNTY ATTORNEY

APPROVED AS TO
TERMS AND CONDITIONS


ISS DEPARTMENT DIRECTOR

ATT.#2

**Palm Beach County
Florida**

2008 Palm Beach County Orthophoto Project

Scope of Work

December 13, 2007

Provided by BAE SYSTEMS





Palm Beach County (2008 Orthophoto Project) - Scope of Work

December 13, 2007

Mr. Kelly Ratchinsky
Countywide GIS Coordinator
Palm Beach County ISS
2300 N. Jog Road, 4th Floor
West Palm Beach, FL 33411

Reference: 2008 Palm Beach County Orthophoto Project

Dear Mr. Ratchinsky,

BAE SYSTEMS is pleased to submit this proposal for providing Color Digital Orthophotography for the entire extent of Palm Beach County.

All of the products and services described below will be completed under the direct supervision of certified photogrammetrists, licensed surveyors and other geospatial professionals and will meet or exceed the standards and specifications for Palm Beach County.

SCOPE OF SERVICES

Project Management

Ms. Debra Taylor will be your overall project manager for this project. She will be BAE SYSTEMS primary point of contact and will have overall management responsibility. Ms. Taylor will produce and distribute all status reports and should be used as the central point for communication. Ms. Taylor will prepare Palm Beach County Contract Management a written report to track the status of production and to note milestones and/or issues that require resolution. BAE SYSTEMS will also prepare and submit monthly invoices based on percent complete.

Aerial Photography

BAE SYSTEMS will acquire new color aerial photography for this project only on days when conditions are considered optimal for collection of aerial photography. Flight will be done using digital cameras/linear scanners incorporating ABGPS receivers and an IMU as integrated components of the system. Other factors during aerial photography acquisition include:

- Aerial Photography will be acquired when the sun angle is at least 30% to minimize shadowing effects.
- Acquisition area is free of haze, smoke and/or fog
- Conditions are considered cloud-free
- Crab shall not exceed 5%
- Extend all photography two full exposures, beyond the project limits.

This new aerial photography will be flown at 15,750' AMT and consist of (22) flight lines with 30% sidelap.



Survey Control

BAE SYSTEMS will receive and utilize the existing geodetic control network that is already in place for the County and this control network will be suitable enough to meet the project specifications and accuracies. We also understand that all control is referenced horizontally to the Florida State Plane Coordinate System (East Zone) in NAD83/90, vertically to the NGVD29 datum, and was performed by a Florida Registered Professional Land Surveyor.

BAE SYSTEMS will not be responsible for any mapping inaccuracies due to County supplied source materials.

Analytical Triangulation

We will perform Softcopy analytical triangulation to extend and densify the ground control survey points, and establish orientation parameters for each image. Softcopy analytical triangulation is an entirely digital process. Our softcopy workstations support sub-pixel accuracy and will be utilized for both compilation and orientation measurement. The results will be checked to make certain that they conform to National Map Accuracy Standards with respect to scale and RMSE.

DEM

BAE SYSTEMS will receive and utilize the existing DEM that is already in place for the County. The DEM data is believed to be suitable to meet the required project specifications and accuracies. If during mapping production BAE finds this not to be true, BAE will contact Palm Beach County for further direction. If needed, BAE can provide the County with a cost estimate to resolve any DEM discrepancies to meet the required accuracies.

Digital Orthophotography

Digital orthorectification will include a spatial and radiometric transformation from line / sample space into the specified ground coordinate system. Inputs into the orthorectification process are the digital image, the interior and exterior orientation parameters for each image, corrections for lens distortion, earth curvature & atmospheric refraction, camera calibration information, and the Digital Elevation Model (DEM). In the process, each pixel in the scanned image is geometrically transformed from a line/sample value to a geographic location. The interior and exterior orientation parameters are used to project each pixel into the ground coordinate system, while the DEM is used to correct for relief displacement.

In order to better reveal subsurface features, a gamma stretch will be used. Color and tone will be defined during the Pilot phase of this project. The final output will be at a 1" = 400' scale with a 2' pixel resolution.

We will ensure that the final orthophotography imagery will be as close as possible to nadir in the direction of flight. This will result in less building lean, less subsurface displacement from water refraction, and less surface reflection from sunlight.

Using this approach, BAE SYSTEMS highly skilled and experienced staff will produce and deliver color digital orthophotos at a 1" = 400' scale with a 2' pixel resolution. Once the images are orthorectified, they are checked for geometric accuracy, image quality, and tone balancing.

The final 2' pixel color digital orthophotography will be a seamless database of imagery delivered in section format to Palm Beach County. Achieving this goal requires that the tone of the imagery be



matched for consistency, and that the individual overlapping orthophotos be mosaicked together. Imagery along adjacent tile edges will not be displaced by more than one pixel.

Project Accuracies

All photogrammetric mapping products are to meet National Map Accuracy Standards(NMAS).

The United States Army Corps of Engineers' interpretation is as follows;

“For NMAS orthophotos, 90 percent of all photographic details on the orthophotography shall be accurate to within at least 1/30 in. of true position, as determined by test surveys, and none of the photographic details shall be displaced by more than 1/15 in. from true coordinate position. Since the orthophoto process rectifies images at the ground elevation of a DTM scan, accuracy standards must exclude objects above and below the scan elevation, such as tops of buildings, poles, trees, and other like objects.”

Therefore, for this project, 1/30 of an inch at publication scale equates to +/-13.33' at 90% confidence level (NMAS) for the 1" =400' maps.

Quality Control

BAE SYSTEMS sought and achieved certification by the International Standards Organization (ISO) in 1998. ISO standards are a series of internationally recognized Quality System requirements that encompass all areas of corporate organization. BAE SYSTEMS Quality Program is an extensive set of processes and tested procedures that ensure our clients receive the highest quality products and services. The following statements summarize our Program:

- BAE SYSTEMS is committed to providing products and services that will meet or exceed the expectations of our customers.
- BAE SYSTEMS will achieve the goals of our Quality Program through our total and continuous dedication to world-class quality in all stages and phases of our production cycle, from beginning to end.
- BAE SYSTEMS will implement our Quality Program via thorough training of our employees to ensure that they understand our external and internal customers, as well as project requirements and deadlines, and can apply the proper procedures needed to meet those requirements on time and without error, each and every time.
- Providing quality products and services is the responsibility of everyone at BAE SYSTEMS.

Delivery Items

- Finalize the flight line and control layout maps and submit to the County for approval
- Prepare and submit the final flight line and control location maps in ArcInfo format
- All tiles will be delivered in World TIFF format and delivered on external harddrive.
- The County will provide the tile layout with tile names in an ArcInfo format (.shp)
- Provide MRSID files based on the County's existing layout at a 30x compression on on external harddrive.
- Metadata incorporated into each TIFF World file as per PBC Specification. An example .tfw will be provided.



Project Schedule

BAE SYSTEMS proposes to commence project mobilization upon Task Order approval. All deliverables will be sent to PBC within one hundred and twenty (120) days after completion of successful aerial photography. (Assuming January 2008).

The following is an approximate delivery schedule:

Contract Execution	January 2008
Aerial Photography, Scanning & Analytical Triangulation	Jan./March 2008
Digital Orthophotography & Project Completion	April/May 2008

Total Project Costs

New Aerial Photography	\$ 61,543
Project Management	\$ 7,925
Analytical Triangulation	\$ 26,354
Digital Orthophotography	\$ 69,178
TOTAL	\$ 165,000

Payment Terms

We will utilize the payment terms that are already in place as per our existing contract with Palm Beach County.

Insurance Coverage

During the terms of any contract which might result from this proposal, BAE SYSTEMS will have in place the following types of insurance coverage: a) professional liability; b) statutory workman's compensation; c) valuable papers insurance; d) public liability protection; e) automobile insurance. BAE SYSTEMS liability of any future claims relating to the services performed as part of this contract will be strictly limited to the total dollar value of the services specified within this proposal.

Thank you for the opportunity to submit this proposal. We look forward to working with you on this very important project. If you have any questions or comments concerning this proposal, please contact Andy Pickford at (856) 793-4316 (office), (215) 499-0983 (cell), or andrew.pickford@baesystems.com

Very Truly Yours,

BAE SYSTEMS

Andrew F. Pickford
Regional Manager

Didi Rufer
Manager Contracts II