

**ORDER FOR SUPPLIES OR SERVICES**

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. N68936-04-D-0026				2. DELIVERY ORDER/ CALL NO. 0001		3. DATE OF ORDER/CALL (YYYYMMDD) 2004 Oct 06		4. REQ./ PURCH. REQUEST NO. See Schedule		5. PRIORITY	
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049				CODE N68936		7. ADMINISTERED BY (if other than 6) CODE S0514A DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241				8. DELIVERY FOB <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER  (See Schedule if other)	
9. CONTRACTOR NAME PHOTON RESEARCH ASSOC INC AND WM. JERRY GRIFFITH ADDRESS 5720 OBERLIN DR SAN DIEGO CA 92121-1723				CODE 7N694		FACILITY		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) <b>SEE SCHEDULE</b>		11. MARK IF BUSINESS IS <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED	
								12. DISCOUNT TERMS		13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Item 15	
14. SHIP TO  <b>SEE SCHEDULE</b>				CODE		15. PAYMENT WILL BE MADE BY CODE HQ0339 DFAS - COLUMBUS CENTER WEST ENTITLEMENT OPERATIONS PO BOX 182381 COLUMBUS OH 43218-2381		MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.			
16. TYPE OF ORDER	DELIVERY/ CALL	<input checked="" type="checkbox"/>	This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.								
	PURCHASE	<input type="checkbox"/>	Reference your quote dated Furnish the following on terms specified herein. REF:								
ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.											
NAME OF CONTRACTOR			SIGNATURE			TYPED NAME AND TITLE			DATE SIGNED (YYYYMMDD)		
<input type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:											
17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE  <b>See Schedule</b>											
18. ITEM NO.		19. SCHEDULE OF SUPPLIES/ SERVICES				20. QUANTITY ORDERED/ ACCEPTED*		21. UNIT	22. UNIT PRICE		23. AMOUNT
		<b>SEE SCHEDULE</b>									
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.		24. UNITED STATES OF AMERICA TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil BY: HENRY G KELLEY						25. TOTAL		\$3,742,841.00	
								26. DIFFERENCES			
27a. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED											
b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE						c. DATE (YYYYMMDD)		d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE			
e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE						28. SHIP NO.		29. DO VOUCHER NO.		30. INITIALS	
f. TELEPHONE NUMBER		g. E-MAIL ADDRESS				<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		32. PAID BY		33. AMOUNT VERIFIED CORRECT FOR	
36. I certify this account is correct and proper for payment.						31. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				34. CHECK NUMBER	
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER								35. BILL OF LADING NO.	
37. RECEIVED AT		38. RECEIVED BY		39. DATE RECEIVED (YYYYMMDD)		40. TOTAL CONTAINERS		41. S/R ACCOUNT NO.		42. S/R VOUCHER NO.	

Section B - Supplies or Services and Prices

This order is determined to be severable.

ITEM NO	SUPPLIES/SERVICES	MAX AMOUNT
0001	Ballistic Missile Defense Engineering Services CPFF – Contract N68936-04-D-0026, Task Order 0001. Provide the engineering services for Ballistic Missile Defense.	
	COST	\$3,458,035
	FIXED FEE	284,806
	CPFF	\$3,742,841
0002	Data	NSP

PAYMENT OF FIXED FEE

Subject to the withholding provisions of the clause at FAR 52.216-8 entitled “Fixed Fee”, the fixed fee specified shall be paid at the rate of 8.250% of all costs expended during each vouchering period, provided, however, that the total fee payable shall not exceed the fee established in the task order.

FUNDING

This severable task order is funded in the amount of \$250,000. \$231,000 is allocated for cost and \$19,000 is allocated for fee. The total allotted funding will provide for performance of approximately 7% of the total effort. The specific accounting and appropriation data applicable to this order is:

SUB-CLIN 000101, ACRN AA in the amount of \$150,000  
 AA 9740400 8ABC 253 SA452 0 068342 2D 000000 070910000040 \$150,000  
 Purchase Requisition Number 0010092508  
 Document Number N0002404WX10855

SUB-CLIN 000102, ACRN AB in the amount of \$100,000  
 AB 97X4930 NH2C 252 77777 0 054219 2F 000000 010659700240 \$100,000  
 Purchase Requisition Number 0010109228  
 Document Number N0002404WX10855  
 CIN 001010922800001

Summary for Payment Office  
 SUBCLIN 000101 ACRN AA \$150,000  
 SUBCLIN 000102 ACRN AB \$100,000

LEVEL OF EFFORT

The estimated level of effort for this order is 24,600 direct labor hours. The composition of hours is as follows:

Labor Category	Hours
T15	Ex b(4)
T14	Ex b(4)
T12	Ex b(4)
T10	Ex b(4)
T09	Ex b(4)
T08	Ex b(4)
T07	Ex b(4)
A07	Ex b(4)
A04	Ex b(4)
Total	24,600

SCOPE

The scope of this task order is contained in Attachment (1), Statement of Work.

INSPECTION AND ACCEPTANCE

Inspection and acceptance will be performed at destination by the Contracting Officer's Representative (COR).

PERIOD OF PERFORMANCE

The period of performance for this task order is 6 October 2005 5 October 2005.

CONTRACTING OFFICER'S REPRESENTATIVE (COR)

The COR is responsible for monitoring the performance and progress as well as overall technical management of this order and should be contacted regarding questions or problems of a technical nature. In no event, however, shall any understanding or agreement, modification, change order, or other matter deviating from the terms of the order between the Contractor and any person other than the Contracting/Ordering Officer be effective or binding upon the Government unless formalized by the proper contractual documents executed by the Contracting/Ordering Officer prior to completion of this task order.

When, in the opinion of the Contractor, the COR requests effort outside the scope of the order, the Contractor shall promptly notify the Contracting/Ordering Officer in writing. No action will be taken by the Contractor under such technical instruction unless the Contracting/Ordering Officer has issued an order change. On all problems that pertain to the contract or order terms, the Contractor shall contact the Contracting/Ordering Officer.

The designated COR is:

Name: Ex b(6)  
Address: Naval Air Warfare Center Weapons Division  
575 I Avenue, Suite 1  
Point Mugu, CA 93042-5000  
Code: 4K9300E  
E-mail: Ex b(6)  
Phone: Ex b(6)

DELIVERABLES

Deliverables will be in accordance with the Contract Data Requirements List (CDRL), DD 1423.

TRAVEL

All requests for travel shall be submitted in writing to the COR for approval at least two weeks prior to planned commencement of travel. Costs associated with any travel not approved in advance by the COR will be disallowed.

MATERIAL

Purchase of material with a unit cost of \$5,000 or less does not require prior government approval.

Statement of Work  
N68936-04-D-0026  
Task Order 0001

Ballistic Missile Defense (BMD) Engineering Services

1.0 INTRODUCTION.

1.1 BACKGROUND. The mission of the Naval Air Warfare Center Weapons Division (NAVAIR WD), Point Mugu, CA, is to be the Navy's full-spectrum Research, Development, Test and Evaluation (RDT&E), and In-service Engineering Center for weapons systems associated with Naval warfare, missiles and missile subsystems and supporting systems, weapons integration, and assigned electronic warfare systems. This responsibility includes performing Developmental and Operational Testing and Evaluation (DOT&E); full operational support and planning for each operation; coordination of post-exercise analysis; and support for Naval Surface Weapons Anti-Air Warfare (AAW) T&E operations and fleet exercises throughout the United States.

1.2 SCOPE. This statement of work (SOW) covers engineering services to be provided to the NAVAIR WD, Point Mugu, CA. Services to be provided are in support of Test and Evaluation (T&E) and systems engineering activities related to Aegis BMD and THAAD Programs at PMRF. Tasking includes Operations Research Support, Physics Analysis, Test Plans and Procedures, Test Data Collection Analysis and Test Data Review, Test Monitoring and Real-Time Mission Support, Program Management Support, Management Reports and Briefing Preparations. Support shall be provided at various national test ranges as required including the Pacific Missile Range Facility (PMRF), Barking Sands, Kauai, HI.

2.0 REQUIREMENTS. The Government will provide the Contractor format requirements, GFI engineering source data, and tasking due dates via individual work authorizations. Contractor format is authorized except in cases where the Government will define the format via individual work authorizations.

2.1 Task Area A--Operations Research Support.

2.1.1 The Contractor shall perform technical analyses related to the performance of land based, sea-based, airborne, and space-based electro-optical sensor systems including National Means Sensors (NMS). This effort will include assessing target detectability (with respect to expected thresholds for the sensor), identification and discrimination ensuring that the experiment is planned so as to be consistent with sensor systems constraints (e.g. background issues, sensor locations, etc.). Analyses will include sensor data fusion and correlation. This effort will build on the analysis products developed during extended tracking and control exercise (ET&CE) and the Aegis BMD FM-2, 3, 4, 5, and 6 missions.

2.1.2 The Contractor shall develop, evaluate, and/or execute threat models to predict the InfraRed (IR) signatures of Navy BMD threats. The models shall include sensitivities of model predictions to parameters, and infrared characterization and modeling of various taxonomies. The Contractor shall assess and validate the model results using Government furnished measurement data to determine if the models accurately predict IR BMD threat signatures for target identification and potential applications to target discrimination.

2.1.3 The Contractor shall assess, apply, and adapt Government furnished discrimination algorithms to BMD threat systems to assist in the development of IR seeker Target Object Map (TOM) functions. This will include algorithms that exploit mean intensity, multicolor temperature-based features, and temporal-based features. Complementary information from multiple sources to assess target/interceptor events shall include metric accuracy data (the difference between measured and truth trajectory) and signature fusion. A discrimination solution for a particular system shall be tailored to the system threat, sensor design, and available processing power. The total solution for an interceptor can incorporate narrow band or wide band radar information, metric information, and optical radiometric data.

2.1.4 The Contractor shall adapt the Battlespace Environmental Signatures Toolkit (BEST), and its supporting databases to the BMD requirements. The model shall produce IR scenes for use in seeker evaluations and real-time hardware-in-the-loop simulations.

2.1.5 The Contractor shall analyze the IR seeker to determine the system performance during engagements. Analysis shall include detection, tracking, discrimination, and aim point selection. The Contractor shall provide recommendations for any improvements based on the analysis.

2.1.6 The Contractor shall define optimum electro-optical sensor data distribution architecture methods for near-real-time application based on web technology and provide recommendations. The Contractor shall analyze and evaluate data management, dissemination, and processing architectures for the various separate and collective optical sensors. The objective is to develop and demonstrate that the infrastructure is in place that will enable the sensor systems to meet overall test mission objectives and requirements. This will include addressing the post-mission data collection, conditioning, dissemination (including bandwidth, timelines, latency, etc.), display, processing, exploitation, storage archiving, and information delivery to the government selected sites and/or other appropriate organizations. The objective of this task is to ensure the overall capability of the integrated range operations to meet the data product requirements and informational needs of the Navy, as well as other service programs using the PMRF range/test facilities.

2.1.7 The Contractor shall provide data analysis of the target intercepts based on the electro-optical and radar sensor data collected during the Aegis FM mission testing. Data analysis will include sensor fusion and correlation from multiple sources. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment.

2.1.8 The Contractor shall provide technical support to NAVAIR WD Pt Mugu, Aegis BMD program office, and PMRF for the stabilized high-accuracy optical tracking system (SHOTS) optics testing/optical instrumentation for test mission support.

## 2.2 Task Area B--Physics Analyses.

2.2.1 The Contractor shall analyze Government-furnished electro-optical data to assess the utility of data for supporting Aegis BMD system evaluations, evaluate the requirements for various types of electro-optical data, define a range of options for meeting the requirements, and provide recommendations, prioritized, of the options. The analyses shall include ground, mobile (ship-based, air-based), and space-based sensors and should consider both existing as well as potential systems. Advanced optical methods for sensing targets will be defined for future applications. Processing methods of hyper- spectral data and high frame rate data will be examined.

2.2.2 The Contractor shall review BMD test scenarios and ensure test requirements for optical systems provide for comprehensive optical data collections. The Contractor shall provide recommendations on how to best achieve comprehensive optical data collection. Waveband selection criteria will be developed by conducting a computational search using the end to end radiometric model to define the band location and bandwidth which maximizes observed signal to noise ratio at typical acquisition ranges.

2.2.3 The Contractor shall demonstrate that discrimination of the target cloud can be made with optical data alone. The Contractor shall demonstrate the exploitation of optical data in the visible through LWIR regions. Optical signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment.

2.2.4 The Contractor shall analyze active optical methods and evaluate potential contributions of the data to BMD testing. These methods shall include incoherent and coherent laser radars and phenomenological issues related to optical propagation through the atmosphere.

2.2.5 The Contractor shall demonstrate the exploitation multi and hyperspectral optical signatures. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment.

2.2.6 The Contractor shall perform laser radar studies for advanced electro-optical sensor detection applications.

2.2.7 The Contractor shall investigate concepts and instrumentation techniques associated with developing optical sky screen capability to support target launch range safety requirements at PMRF.

2.2.8 The Contractor shall investigate photo-optical instrumentation techniques for supporting and covering target launches.

## 2.3 Task Area C--Test Plans and Procedures.

2.3.1 The Contractor shall develop or review mission scenarios and preliminary and final test plans/requirements to meet Government test objectives. For scenarios the Contractor shall include a flow-down of test objectives to the scenario requirements, and detailed definition/planning of the test scenario including target type, presentation, trajectory and timing. The

test plans/requirements shall address, as applicable, target presentations, characteristics of the required targets and their expected performance parameters, timing, engagement geometry, multiple targets, range safety issues. Coordination with all personnel associated with the test operations is also required including ship personnel, range personnel, and all personnel associated with supporting sensors, instrumentation requirements, data collection, target definition, preliminary and final mission firing plans, and test operations. This task will require establishing a technical interface with multiple activities so that there is a clear understanding at an operational level of the technical issues. This effort shall require coordination with organizations such as Missile Defense Agency, NAVSEASCOM Program Executive Office Integrated Warfare Systems (PEO IWS), PMRF, Aegis BMD Program, United States Army Space and Missile Defense Command (USASMDC), Air Force Space Systems Division, Air Force Maui Optical Station (AMOS)/ Maui Space Surveillance Site (MSSS); PMRF; SPAWAR, Naval Surface Warfare Center (NSWC) Corona, and other non-Navy organizations that are involved in the Navy T&E efforts.

2.3.2 The Contractor shall identify and recommend targets for testing to meet Government test objectives. The Contractor shall define target selection criteria and assessment of potential targets against those criteria. The selection criteria would include: (a) the degree to which candidate targets are good surrogates for the threat targets; (b) availability of launch platforms and ranges to support the target launches; (c) cost and schedule constraints; and (d) environmental considerations. The Contractor shall determine if T&E objectives can be met against targets of opportunity (TOOs) rather than dedicated targets. The Contractor shall identify potential TOOs (including Missile Defense Agency tests, operational missile tests, and space launches), and then correlate the sensor/test options associated with these targets against T&E objectives.

2.3.3 The Contractor shall define instrumentation requirements and data analysis products for BMD testing, and shall derive requirements for the data collection from all relevant sensors including: (a) telemetry from the targets and intercepting missiles; (b) tracking range radar support (independent of the AEGIS AN/SPY-1 radar); (c) photo-documentation sensors; (d) telescope sensors; and (e) ground-based and airborne, visible, Short Wave Infrared (SWIR), Mid-wave InfraRed (MWIR) and Long-wave InfraRed (LWIR) sensors. The Contractor shall identify existing tools for processing the data, identify any deficiencies, and correct these deficiencies by developing the necessary techniques to analyze the data. This process of identifying the final analysis products shall be incorporated into the test planning process. Mission test data from the AEGIS Weapons System shall also be included in the analyses. This will include collecting data necessary to support assessment of all aspects of system detection/control/engagements so that correlations can be made with data collected by electro-optical sensors and other telemetry (TM) and radar sources. This function also includes definition of collection requirements for range instrumentation and supporting sensors. The contractor shall identify data products required for post mission analyses in the DMAP (Data Management Analysis Plan prepared by NSWC Corona) that is prepared for each Aegis BMD mission.

2.3.4 The Contractor shall develop integrated test plans for utilizing ground, space, and mobile (air, sea) based optical sensor systems. Test plans will identify all test-planning procedures including pre-mission sensor testing, mission data collection, real-time data transmission, and post-mission data analysis. Test plans would also identify, among other things, specific data elements to be collected for data analysis, data products to be delivered, test limitations, communications, personnel, internal range readiness testing, simulations, target trajectory, and frequency management for data transmission.

2.3.5 The Contractor shall attend working group meetings as required for the Aegis BMD and THAAD programs including Instrumentation Working Groups (IWGs), Data Analysis Working Groups (DAWGs), Test and Evaluation Working Groups (TEWGs), Auxiliary Sensor Mission Readiness Reviews (ASMRRs) and other T&E planning meetings.

2.3.6 The Contractor shall develop Navy test and evaluation plans for evaluating mobile optics capabilities of the SHOTS on the MATSS platform and at PMRF.

2.3.8 The contractor shall develop a master integrated test plan that combines under one document all of the auxiliary sensor test conduct requirements including test support positions (TSPs), communication frequencies, call signs, sensor requirements, test procedures, range safety factors, personnel required and POC's at PMRF, test schedules for the readiness test preps including the mission, timeline for mission conduct, data to be collected, and required reports for T+4 hrs, T+96 hrs, and T+ 30/60 days.

#### 2.4 Task Area D--Test Data Collection Analysis and Test Data Review.

2.4.1 The Contractor shall edit and correlate Infrared field and flight test data for repeatability and comparability, including processing and analyzing data from a diverse number of sources, AEGIS radar data, telemetry, range radar data, satellite data, sea-based, ground-, air-, and space-based optical and video data and shall analyze these data on a data analysis workstation to ensure that test objectives were met. The Contractor shall prepare test reports that compile analysis results and summarize findings. The Contractor shall provide the Government copies of the test reports and data packages in both hard copy and digital media.

2.4.2 The Contractor will support the analysis of specific issues related to electro-optics data collection and optics mount and sensor issues including mission requirements analysis for mount and sensor assignments on workstations in the PMRF DAC. Data will be ingested from multiple optical sensor sources for data reduction and analysis using the Tirade software.

2.4.3 The Contractor shall provide briefs and demonstrations of the workstations used to reduce optical data from Aegis BMD missions as required.

2.4.4 The Contractor shall support the software development for data reduction and analysis of the electro-optical sensor mission data sets to improve overall efficiency and accuracy of test data analysis.

## 2.5 Task Area E--Test Monitoring and Real-Time Mission Support

2.5.1 The Contractor shall attend test events to verify test requirements and procedures, monitor the test being conducted, and record test results/corrective actions as required. The Contractor shall report in real-time any observed problems and recommended corrective actions to the Government.

2.5.2 The Contractor shall assist in the development of an optical data analysis capability to support the reduction and analysis of optics data collected during test operations.

2.5.3 The Contractor shall provide real-time mission support for the collection of optics data. This effort shall include participation at the various optical mounts and sensor sites, as well as post-operation optics data reduction, analysis, and reporting.

2.5.4 The contractor shall provide support for test planning, test conduct, data reduction and analysis, and reporting of all electro-optical sensor data collected during critical mission counter measures and other flight test missions.

## 2.6 Task Area F--Program Management Support.

2.6.1 The Contractor shall develop or review BMD program documents including but not limited to BMD Operational Requirements Document (ORD), the Test and Evaluation Master Plan (TEMP), the Aegis Ballistic Missile FM test plan, including the Integrated Test Plan (ITP), the Program Introduction (PI), and the Operational Requirement (OR) and Operational Directive (OD) for correctness, completeness, and determine if the documents meet Government objectives. This documentation will include the production of draft documents for Government review related to more detailed test plans.

2.6.2 The Contractor shall support the development of a Program Support Plan and Flight Mission Test Plans to assist in identifying and ensuring that sensors meet the scenario test objectives and mission requirements. This will encompass determining the best use of optics and sensors, as well as the capabilities of auxiliary sensors to include but not be limited to the Stabilized High Accuracy Optical System (SHOTS) at PMRF and on the Mobile Aerial Target Support Ship (MATSS), Air Force Maui Optical Station (AMOS), the High Altitude Observatory (HALO I and II) aircraft sensors, including the Infrared Imaging System (IRIS), a the wide-body airborne sensor platform (WASP), and National Means Sensors.

## 2.7 Task Area G--Management Reports and Briefing Preparations.

2.7.1 The Contractor using government furnished information (GFI) shall develop presentation materials such as digital images, view-graphs, slides, video tapes, and printed media in the form of reports, instructions, and other materials as required by program management in the support of tasking identified in section 3 of this SOW. The media used shall be electronic or digital wherever practical and/or hard copy as required.

2.7.2 The Contractor shall prepare Monthly Activity and Status Reports to the Contracting Officer's Representative (COR) as specified in each TO. The format and content for the reports will be specified in each TO. The media used to convey the reports shall be electronic or digital wherever practical and/or hard copy as required.

2.7.3 The Contractor shall provide technical and engineering support at engineering reviews, T&E engineering planning and coordination meetings, T&E operational planning and coordination meetings at various locations relevant to the planning and conduct of BMD events. The contractor shall provide reviews and minutes of meetings attended.

## 3.0 DATA DELIVERABLES

3.1 Specific items of reports, test plans, procedures, technical support documentation, presentation materials, meeting minutes, and progress reports will be provided in accordance with Form DD-1423.

#### 4.0 SPECIAL CONSIDERATIONS.

4.1 Security. The Contractor shall perform work up to the level of SECRET in the performance of this contract in accordance with applicable DD-254.

#### 5.0 GOVERNMENT POINTS OF CONTACT.

Contracting Officer's Representative (COR):  
Ex b(6)

NAVAIR WD Code 4K9300E  
Point Mugu, CA 93042-5049  
Work: (805) Ex b(6)  
FAX: (805) 989-0585  
Cell: (805) Ex b(6)  
e-mail: Ex b(6)

Contracting Officer Technical Representative (COTR)/Technical Assistant (TA):  
Ex b(6)

NAVAIR WD Code 4KEL00E  
Point Mugu, CA 93042-5049  
Work: (805) Ex b(6)  
FAX: (805) 989-0585  
Cell: (805) Ex b(6)  
e-mail: Ex b(6)

#### 5.1 Government Facility Access.

5.1.1 The Contractor will require access to Naval Base Ventura County (NBVC) restricted areas of the Industrial Areas at Point Mugu, CA

5.1.2 The Contractor will require access to Pacific Missile Range Facility (PMRF) at Barking Sands, Kauai, HI.

5.1.3 The Contractor will require access to Maui Space Surveillance Site (MSSS) and Air Force Maui Optical Station (AMOS), Maui, HI.

5.1.4 The Contractor will require access to White Sands Missile Range (WSMR), NM.

5.1.5 After hours access may be required.

5.2 Government-Furnished Property. Apple G5 (Serial Number YM3997UPGXD) and associated monitor, keyboard, and mouse.

#### 5.3 Government-Furnished Data/Access.

5.3.1 The Contractor will be provided access to the data itemized in paragraph 2.2.

5.3.2 The Contractor will not be provided Government facilities workspace.

#### 5.4 Travel.

5.4.1 Local travel at the Joint Travel Regulation (JTR) approved rate may be required in the performance of this contract.

5.4.2 All requests for travel shall be submitted in writing to the Contracting Officer's Representative for approval at least two weeks prior to planned commencement of travel. Each travel request shall include budgeted travel amount, projected cost for requested trip, and balance of allowed travel costs remaining. Each travel request shall itemize trip duration, airfare, cost of

lodging, per diem, car rental, miscellaneous expenses and name of traveler(s). Travel in support of this task order is anticipated to be as follows:

From	To	People	Trips	Days
San Diego, CA	Kauai, HI	04	08	10
San Diego, CA	Maui, HI	04	03	12
San Diego, CA	Maui, HI	04	03	10
San Diego, CA	Washington, DC	02	02	03
San Diego, CA	Washington, DC	02	02	04
San Diego, CA	Huntsville, AL	02	02	03
San Diego, CA	Huntsville, AL	02	02	04
San Diego, CA	Oxnard, CA	01	01	02
San Diego, CA	Oxnard, CA	02	01	03
San Diego, CA	Moorestown, NJ	01	02	05
San Diego, CA	Colorado Springs, CO	01	01	05
San Diego, CA	Tucson, AZ	01	04	05
Maui, HI	Washington, DC	01	03	04

5.5 Training. None.

5.6 Materials/Supplies.

5.6.1 Small value materials and supplies may be required in the performance of this Contract.

5.6.2 Materials in support of electro-optical/surveillance sensors including photo-optical and command and control and communication systems instrumentation utilized to support testing, may be required in the performance of this contract.

5.7 Period of Performance

5.7.1 The period of performance for this task order shall be 6 October 2005 through 5 October 2006.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 01	3. EFFECTIVE DATE 06-Oct-2004	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CODE N68936 CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		7. ADMINISTERED BY (If other than item 6) CODE S0514A DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241			
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X	10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand0524 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Henry G Kelley</u> (Signature of Contracting Officer)		16C. DATE SIGNED 06-Oct-2004

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to correct the period of performance provided on pages 3 and 9 of Task Order 0001 to read as follows –

The period of performance for this task order is 6 October 2004 through 5 October 2005.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 02	3. EFFECTIVE DATE 18-Jan-2005	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CODE CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		7. ADMINISTERED BY (If other than item 6) CODE DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X	10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand05630 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) TAMMY JOURNET / PROCURING CONTRACTING OFFICER TEL: (805) 989-4383 EMAIL: tammyjournet@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Tammy L Journet</u> (Signature of Contracting Officer)		16C. DATE SIGNED 18-Jan-2005

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## SUMMARY OF CHANGES

Task Order 0001 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>FROM</u>	<u>BY</u>	<u>TO</u>
Estimated Cost	\$231,000	\$277,000	\$508,000
Fixed Fee	19,000	\$23,000	42,000
CPFF	\$250,000	\$300,000	\$550,000

2. As of the date of execution of this modification, there has been allotted the sum of \$550,000. The balance to fully fund this task order is \$3,192,841. The total funding shall provide for performance of approximately 15% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000103, ACRN AC in the amount of \$300,000  
 AC 9750400 8ABC 253 SA452 0 068342 2D 054060 070910000040 \$300,000  
 Purchase Request Number – 0010126370  
 CIN – 001012637000001  
 Document Number – N0002405WX11139  
 CSS IWP – 310212004055659

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$150,000
SUB-CLIN 000102	ACRN: AB	\$100,000
SUB-CLIN 000103	ACRN: AC	\$300,000

All other terms and conditions remain the same.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   3
2. AMENDMENT/MODIFICATION NO. 03	3. EFFECTIVE DATE 03-Mar-2005	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CODE CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		N68936	7. ADMINISTERED BY (If other than item 6) CODE DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X 10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694		FACILITY CODE		
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand05895 See page two.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil	
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Henry G Kelley</u> (Signature of Contracting Officer)	
			16C. DATE SIGNED 03-Mar-2005	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0001 under Contract N68936-04-D-0026 is modified to provide incremental funding.

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>FROM</u>	<u>BY</u>	<u>TO</u>
Estimated Cost	\$508,000	\$868,000	\$1,376,000
Fixed Fee	42,000	71,753	113,753
CPFF	\$550,000	\$939,753	\$1,489,753

2. As of the date of execution of this modification, there has been allotted the sum of \$1,489,753. The balance to fully fund this task order is \$2,253,088. The total funding shall provide for performance of approximately 40% of the effort.

**3. NOTE TO PAYMENT OFFICE – Please process ACRNs AD, AE, and AF for payment prior to processing any other ACRNs.**

The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000103, ACRN AC in the amount of \$760,000  
 AC 9750400 8ABC 253 SA452 0 068342 2D 054060 070910000040 \$760,000 “Increase”  
 Purchase Request Number – 0010126370-0001  
 CIN - 001012637000002  
 Document Number – N0002405WX11139  
 CSS IWP - 310212004055659

SUB-CLIN 000104, ACRN AD in the amount of \$74,000  
 AD 97X4930 NH2C 252 77777 0 054219 2F 000000 010659700110 \$74,000  
 Purchase Request Number – 0010130521  
 CIN - 001013052100001  
 Document Number – N0002404WX10855  
 CSS IWP - 310212004055659

SUB-CLIN 000105, ACRN AE in the amount of \$79,502.96  
 AE 9740400 8ABC 253 SA452 0 068342 2D 000000 070910000040 \$79,502.96  
 Purchase Request Number – 0010130460  
 CIN - 001013046000001  
 Document Number – N0002404WX10855  
 CSS IWP – 310212004055659

SUB-CLIN 000106, ACRN AF in the amount of \$26,250.04  
 AF 1751804 70CA 250 00070 M 045924 2D X3R147 05345THA4QQ0 \$26,250.04  
 Purchase Request Number – 0010132457  
 CIN - 001013245700001  
 Document Number – N0534A05WX3R147  
 CSS IWP – 310212004055659

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 26,250.04

All other terms and conditions remain the same.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   9	
2. AMENDMENT/MODIFICATION NO. 04	3. EFFECTIVE DATE 09-Mar-2005	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CODE CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		7. ADMINISTERED BY (If other than item 6) CODE DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X	10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual agreement. Ref: jgriffith@photon.com dated 9 March 2005					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand051024 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Henry G Kelley</u> (Signature of Contracting Officer)		16C. DATE SIGNED 14-Mar-2005	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

The purpose of this modification is to delete SUB-CLIN 000106 (ACRN AF) in its entirety and REPLACE with SUB-CLIN 000107 (ACRN AG) and to provide a revised Statement of Work (with changes in bold lettering) to enhance understanding of Statement of Work requirements.

SUB-CLIN 000107, ACRN AG in the amount of \$26,250.04

AG 1751804 70CA 250 00070 M 045924 2D X3R147 0534A5THA4QQ \$26,250.04

Purchase Request Number – 0010132457-0001

Document Number – N0534A05WX3R147

CSS IWP – 310212004055659

## Summary for Payment Office

SUB-CLIN 000101	ACRN AA	\$ 150,000.00
SUB-CLIN 000102	ACRN AB	\$ 100,000.00
SUB-CLIN 000103	ACRN AC	\$1,060,000.00
SUB-CLIN 000104	ACRN AD	\$ 74,000.00
SUB-CLIN 000105	ACRN AE	\$ 79,502.96
SUB-CLIN 000106	ACRN AF	\$ 00.00
SUB-CLIN 000107	ACRN AG	\$ 26,250.04

**STATEMENT OF WORK  
TASK ORDER 0001**

**Ballistic Missile Defense (BMD) Engineering Services**

**1.0 INTRODUCTION.**

1.1 **BACKGROUND.** The mission of the Naval Air Warfare Center Weapons Division (NAVAIR WD), Point Mugu, CA, is to be the Navy's full-spectrum Research, Development, Test and Evaluation (RDT&E), and In-service Engineering Center for weapons systems associated with Naval warfare, missiles and missile subsystems and supporting systems, weapons integration, and assigned electronic warfare systems. This responsibility includes performing Developmental and Operational Testing and Evaluation (DOT&E); full operational support and planning for each operation; coordination of post-exercise analysis; and support for Naval Surface Weapons Anti-Air Warfare (AAW) T&E operations and fleet exercises throughout the United States.

1.2 **SCOPE.** This statement of work (SOW) covers engineering services to be provided to the NAVAIR WD, Point Mugu, CA. Services to be provided are in support of Test and Evaluation (T&E) and systems engineering activities related to Aegis BMD and THAAD Programs at PMRF. Tasking includes Operations Research Support, Physics Analysis, Test Plans and Procedures, Test Data Collection Analysis and Test Data Review, Test Monitoring and Real-Time Mission Support, Program Management Support, Management Reports and Briefing Preparations. Support shall be provided at various national test ranges as required including the Pacific Missile Range Facility (PMRF), Barking Sands, Kauai, HI.

2.0 **REQUIREMENTS.** The Government will provide the Contractor format requirements, GFI engineering source data, and tasking due dates via individual work authorizations. Contractor format is authorized except in cases where the Government will define the format via individual work authorizations.

**2.1 Task Area A--Operations Research Support.**

2.1.1 The Contractor shall perform technical analyses related to the performance of land based, sea-based, airborne, and space-based electro-optical sensor systems including National Means Sensors (NMS). This effort will include assessing target detectability (with respect to expected thresholds for the sensor), identification and discrimination ensuring that the experiment is planned so as to be consistent with sensor systems constraints (e.g. background issues, sensor locations, etc.). Analyses will include sensor data fusion and correlation. This effort will build on the analysis products developed during extended tracking and control exercise (ET&CE) and the Aegis BMD FM-2, 3, 4, 5, and 6 missions.

2.1.2 The Contractor shall develop, evaluate, and/or execute threat models to predict the InfraRed (IR) signatures of Navy BMD threats. The models shall include sensitivities of model predictions to parameters, and infrared characterization and modeling of various taxonomies. The Contractor shall assess and validate the model results using Government furnished measurement data to determine if the models accurately predict IR BMD threat signatures for target identification and potential applications to target discrimination.

2.1.3 The Contractor shall assess, apply, and adapt Government furnished discrimination algorithms to BMD threat systems to assist in the development of IR seeker Target Object Map (TOM) functions. This will include algorithms that exploit mean intensity, multicolor temperature-based features, and temporal-based features. Complementary information from multiple sources to assess target/interceptor events shall include metric accuracy data (the difference between measured and truth trajectory) and signature fusion. A discrimination solution for a particular system shall be tailored to the system threat, sensor design, and available processing power. The total solution for an interceptor can incorporate narrow band or wide band radar information, metric information, and optical radiometric data.

2.1.4 The Contractor shall adapt the Battlespace Environmental Signatures Toolkit (BEST), and its supporting databases to the BMD requirements. The model shall produce IR scenes for use in seeker evaluations and real-time hardware-in-the-loop simulations.

2.1.5 The Contractor shall analyze the IR seeker to determine the system performance during engagements. Analysis shall include detection, tracking, discrimination, and aim point selection. The Contractor shall provide recommendations for any improvements based on the analysis.

2.1.6 The Contractor shall define optimum electro-optical sensor data distribution architecture methods for near-real-time application based on web technology and provide recommendations. The Contractor shall analyze and evaluate data management, dissemination, and processing architectures for the various separate and collective optical sensors. The objective is to develop and demonstrate that the infrastructure is in place that will enable the sensor systems to meet overall test mission objectives and requirements. This will include addressing the post-mission data collection, conditioning, dissemination (including bandwidth, timelines, latency, etc.), display, processing, exploitation, storage archiving, and information delivery to the government selected sites and/or other appropriate organizations. The objective of this task is to ensure the overall capability of the integrated range operations to meet the data product requirements and informational needs of the Navy, as well as other service programs using the PMRF range/test facilities.

2.1.7 The Contractor shall provide data analysis of the target intercepts based on the electro-optical and radar sensor data collected during the Aegis FM mission testing. Data analysis will include sensor fusion and correlation from multiple sources. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment.

2.1.8 The Contractor shall provide technical support to NAVAIR WD Pt Mugu, Aegis BMD program office, and PMRF for the stabilized high-accuracy optical tracking system (SHOTS) optics testing/optical instrumentation for test mission support.

### **2.1.9 The Contractor shall perform technical analyses related to the performance of land based sensor systems known as Pacific Missile Range Facility (PMRF) Early Launch Tracking System (PELTS).**

## **2.2 Task Area B--Physics Analyses.**

2.2.1 The Contractor shall analyze Government-furnished electro-optical data to assess the utility of data for supporting Aegis BMD system evaluations, evaluate the requirements for various types of electro-optical data, define a range of options for meeting the requirements, and provide recommendations, prioritized, of the options. The analyses shall include ground, mobile (ship-based, air-based), and space-based sensors and should consider both existing as well as potential systems. Advanced optical methods for sensing targets will be defined for future applications. Processing methods of hyper-spectral data and high frame rate data will be examined.

2.2.2 The Contractor shall review BMD test scenarios and ensure test requirements for optical systems provide for comprehensive optical data collections. The Contractor shall provide recommendations on how to best achieve comprehensive optical data collection. Waveband selection criteria will be developed by conducting a computational search using the end to end radiometric model to define the band location and bandwidth which maximizes observed signal to noise ratio at typical acquisition ranges.

2.2.3 The Contractor shall demonstrate that discrimination of the target cloud can be made with optical data alone. The Contractor shall demonstrate the exploitation of optical data in the visible through LWIR regions. Optical signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment.

2.2.4 The Contractor shall analyze active optical methods and evaluate potential contributions of the data to BMD testing. These methods shall include incoherent and coherent laser radars and phenomenological issues related to optical propagation through the atmosphere.

2.2.5 The Contractor shall demonstrate the exploitation multi and hyperspectral optical signatures. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment.

2.2.6 The Contractor shall perform laser radar studies for advanced electro-optical sensor detection applications.

2.2.7 The Contractor shall investigate concepts and instrumentation techniques associated with developing optical sky screen capability to support target launch range safety requirements at PMRF.

2.2.8 The Contractor shall investigate photo-optical instrumentation techniques for supporting and covering target launches.

### **2.3 Task Area C--Test Plans and Procedures.**

2.3.1 The Contractor shall develop or review mission scenarios and preliminary and final test plans/requirements to meet Government test objectives. For scenarios the Contractor shall include a flow-down of test objectives to the scenario requirements, and detailed definition/planning of the test scenario including target type, presentation, trajectory and timing. The test plans/requirements shall address, as applicable, target presentations, characteristics of the required targets and their expected performance parameters, timing, engagement geometry, multiple targets, range safety issues. Coordination with all personnel associated with the test operations is also required including ship personnel, range personnel, and all personnel associated with supporting sensors, instrumentation requirements, data collection, target definition, preliminary and final mission firing plans, and test operations. This task will require establishing a technical interface with multiple activities so that there is a clear understanding at an operational level of the technical issues. This effort shall require coordination with organizations such as Missile Defense Agency, NAVSEASCOM Program Executive Office Integrated Warfare Systems (PEO IWS), PMRF, Aegis BMD Program, United States Army Space and Missile Defense Command (USASMDC), Air Force Space Systems Division, Air Force Maui Optical Station (AMOS)/ Maui Space Surveillance Site (MSSS); PMRF; SPAWAR, Naval Surface Warfare Center (NSWC) Corona, and other non-Navy organizations that are involved in the Navy T&E efforts.

2.3.2 The Contractor shall identify and recommend targets for testing to meet Government test objectives. The Contractor shall define target selection criteria and assessment of potential targets against those criteria. The selection criteria would include: (a) the degree to which candidate targets are good surrogates for the threat targets; (b) availability of launch platforms and ranges to support the target launches; (c) cost and schedule constraints; and (d) environmental considerations. The Contractor shall determine if T&E objectives can be met against targets of opportunity (TOOs) rather than dedicated targets. The Contractor shall identify potential TOOs (including Missile Defense Agency tests, operational missile tests, and space launches), and then correlate the sensor/test options associated with these targets against T&E objectives.

2.3.3 The Contractor shall define instrumentation requirements and data analysis products for BMD testing, and shall derive requirements for the data collection from all relevant sensors including: (a) telemetry from the targets and intercepting missiles; (b) tracking range radar support (independent of the AEGIS AN/SPY-1 radar); (c) photo-documentation sensors; (d) telescope sensors; and (e) ground-based and airborne, visible, Short Wave Infrared (SWIR), Mid-wave InfraRed (MWIR) and Long-wave InfraRed (LWIR) sensors. The Contractor shall identify existing tools for processing the data, identify any deficiencies, and correct these deficiencies by developing the necessary techniques to analyze the data. This process of identifying the final analysis products shall be incorporated into the test planning process. Mission test data from the AEGIS Weapons System shall also be included in the analyses. This will include collecting data necessary to support assessment of all aspects of system detection/control/engagements so that correlations can be made with data collected by electro-optical sensors and other telemetry (TM) and radar sources. This function also includes definition of collection requirements for range instrumentation and supporting sensors. The contractor shall identify data products required for post mission

analyses in the DMAP (Data Management Analysis Plan prepared by NSWC Corona) that is prepared for each Aegis BMD mission.

2.3.4 The Contractor shall develop integrated test plans for utilizing ground, space, and mobile (air, sea) based optical sensor systems. Test plans will identify all test-planning procedures including pre-mission sensor testing, mission data collection, real-time data transmission, and post-mission data analysis. Test plans would also identify, among other things, specific data elements to be collected for data analysis, data products to be delivered, test limitations, communications, personnel, internal range readiness testing, simulations, target trajectory, and frequency management for data transmission.

2.3.5 The Contractor shall attend working group meetings as required for the Aegis BMD and THAAD programs including Instrumentation Working Groups (IWGs), Data Analysis Working Groups (DAWGs), Test and Evaluation Working Groups (TEWGs), Auxiliary Sensor Mission Readiness Reviews (ASMRRs) and other T&E planning meetings.

2.3.6 The Contractor shall develop Navy test and evaluation plans for evaluating mobile optics capabilities of the SHOTS on the MATSS platform and at PMRF.

2.3.7 The contractor shall develop a master integrated test plan that combines under one document all of the auxiliary sensor test conduct requirements including test support positions (TSPs), communication frequencies, call signs, sensor requirements, test procedures, range safety factors, personnel required and POC's at PMRF, test schedules for the readiness test preps including the mission, timeline for mission conduct, data to be collected, and required reports for T+4 hrs, T+96 hrs, and T+ 30/60 days.

**2.3.8 The Contractor shall perform an analysis of Commercial-off-the-shelf (COTS) systems to determine recommended solutions that satisfy the PELTS Technical Requirements Document (TRD). The contractor shall provide a report detailing the analysis of COTS solutions for PELTS within 30 days of TRD completion.**

#### **2.4 Task Area D--Test Data Collection Analysis and Test Data Review.**

2.4.1 The Contractor shall edit and correlate **Infrared** field and flight test data for repeatability and comparability, including processing and analyzing data from a diverse number of sources, AEGIS radar data, telemetry, range radar data, satellite data, sea-based, ground-, air-, and space-based optical and video data and shall analyze these data on a data analysis workstation to ensure that test objectives were met. The Contractor shall prepare test reports that compile analysis results and summarize findings. The Contractor shall provide the Government copies of the test reports and data packages in both hard copy and digital media.

2.4.2 The Contractor will support the analysis of specific issues related to electro-optics data collection and optics mount and sensor issues including mission requirements analysis for mount and sensor assignments on workstations in the PMRF DAC. Data will be ingested from multiple optical sensor sources for data reduction and analysis using the Tirade software.

2.4.3 The Contractor shall provide briefs and demonstrations of the workstations used to reduce optical data from Aegis BMD missions as required.

2.4.4 The Contractor shall support the software development for data reduction and analysis of the electro-optical sensor mission data sets to improve overall efficiency and accuracy of test data analysis.

#### **2.5 Task Area E--Test Monitoring and Real-Time Mission Support**

2.5.1 The Contractor shall attend test events to verify test requirements and procedures, monitor the test being conducted, and record test results/corrective actions as required. The Contractor shall report in real-time any observed problems and recommended corrective actions to the Government.

2.5.2 The Contractor shall assist in the development of an optical data analysis capability to support the reduction and analysis of optics data collected during test operations.

2.5.3 The Contractor shall provide real-time mission support for the collection of optics data. This effort shall include participation at the various optical mounts and sensor sites, as well as post-operation optics data reduction, analysis, and reporting.

2.5.4 The contractor shall provide support for test planning, test conduct, data reduction and analysis, and reporting of all electro-optical sensor data collected during critical mission counter measures and other flight test missions.

## **2.6 Task Area F--Program Management Support.**

2.6.1 The Contractor shall develop or review BMD program documents including but not limited to BMD Operational Requirements Document (ORD), the Test and Evaluation Master Plan (TEMP), the Aegis Ballistic Missile FM test plan, including the Integrated Test Plan (ITP), the Program Introduction (PI), and the Operational Requirement (OR) and Operational Directive (OD) for correctness, completeness, and determine if the documents meet Government objectives. This documentation will include the production of draft documents for Government review related to more detailed test plans.

2.6.2 The Contractor shall support the development of a Program Support Plan and Flight Mission Test Plans to assist in identifying and ensuring that sensors meet the scenario test objectives and mission requirements. This will encompass determining the best use of optics and sensors, as well as the capabilities of auxiliary sensors to include but not be limited to the Stabilized High Accuracy Optical System (SHOTS) at PMRF and on the Mobile Aerial Target Support Ship (MATSS), Air Force Maui Optical Station (AMOS), the High Altitude Observatory (HALO I and II) aircraft sensors, including the Infrared Imaging System (IRIS), a the wide-body airborne sensor platform (WASP), and National Means Sensors.

### **2.6.3 The Contractor shall develop input to revisions of the draft Technical Requirements Document (TRD) for PELTS.**

## **2.7 Task Area G--Management Reports and Briefing Preparations.**

2.7.1 The Contractor using government furnished information (GFI) shall develop presentation materials such as digital images, view-graphs, slides, video tapes, and printed media in the form of reports, instructions, and other materials as required by program management in the support of tasking identified in section 3 of this SOW. The media used shall be electronic or digital wherever practical and/or hard copy as required.

2.7.2 The Contractor shall prepare Monthly Activity and Status Reports to the Contracting Officer's Representative (COR) as specified in each TO. The format and content for the reports will be specified in each TO. The media used to convey the reports shall be electronic or digital wherever practical and/or hard copy as required.

2.7.3 The Contractor shall provide technical and engineering support at engineering reviews, T&E engineering planning and coordination meetings, T&E operational planning and coordination meetings at various locations relevant to the planning and conduct of BMD events. The contractor shall provide reviews and minutes of meetings attended.

## **3.0 DATA DELIVERABLES**

3.1 Specific items of reports, test plans, procedures, technical support documentation, presentation materials, meeting minutes, and progress reports will be provided in accordance with Form DD-1423.

#### 4.0 SPECIAL CONSIDERATIONS.

4.1 **Security.** The Contractor shall perform work up to the level of SECRET in the performance of this contract in accordance with applicable DD-254.

#### 5.0 GOVERNMENT POINTS OF CONTACT.

##### **Contracting Officer's Representative (COR):**

Ex b(6)

NAVAIR WD Code 4K9300E

Point Mugu, CA 93042-5049

Work: (805) Ex b(6)

FAX: (805) 989-0585

Cell: (805) Ex b(6)

e-mail: Ex b(6)

##### **Contracting Officer Technical Representative (COTR)/Technical Assistant (TA):**

Ex b(6)

NAVAIR WD Code 4KEL00E

Point Mugu, CA 93042-5049

Work: (805) Ex b(6)

FAX: (805) 989-0585

Cell: (805) Ex b(6)

e-mail: Ex b(6)

#### 5.1 Government Facility Access.

5.1.1 The Contractor will require access to Naval Base Ventura County (NBVC) restricted areas of the Industrial Areas at Point Mugu, CA.

5.1.2 The Contractor will require access to Pacific Missile Range Facility (PMRF) at Barking Sands, Kauai, HI.

5.1.3 The Contractor will require access to Maui Space Surveillance Site (MSSS) and Air Force Maui Optical Station (AMOS), Maui, HI.

5.1.4 The Contractor will require access to White Sands Missile Range (WSMR), NM.

5.1.5 After hours access may be required.

5.2 **Government-Furnished Property.** None.

5.3 **Government-Furnished Data/Access.**

5.3.1 The Contractor will be provided access to the data itemized in paragraph 2.2.

5.3.2 The Contractor will not be provided Government facilities workspace.

5.4 **Travel.**

5.4.1 Local travel at the Joint Travel Regulation (JTR) approved rate may be required in the performance of this contract.

**5.4.2** All requests for travel shall be submitted in writing to the Contracting Officer's Representative for approval at least two weeks prior to planned commencement of travel. Each travel request shall include budgeted travel amount, projected cost for requested trip, and balance of allowed travel costs remaining. Each travel request shall itemize trip duration, airfare, cost of lodging, per diem, car rental, miscellaneous expenses and name of traveler(s). Travel in support of this task order is anticipated to be as follows:

From	To	Trips	Persons	Days
San Diego, CA	Huntsville, AL	04	01	05
San Diego, CA	Tucson, AZ	04	01	05
San Diego, CA	Point Mugu, CA	02	01	05
San Diego, CA	Colorado Springs, CO	01	01	05
San Diego, CA	Washington, DC	06	01	05
San Diego, CA	Moorestown, NJ	02	01	05
San Diego, CA	Kauai, HI	08	04	10
San Diego, CA	Maui, HI	08	04	10
San Diego, CA	Oahu, HI	08	04	10
San Diego, CA	Albuquerque, NM	02	01	05

**5.5 Training.** None.

**5.6 Materials/Supplies.**

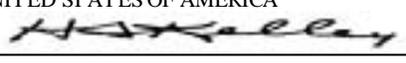
**5.6.1** Small value materials and supplies may be required in the performance of this Contract.

**5.6.2** Materials in support of electro-optical/surveillance sensors including photo-optical and command and control and communication systems instrumentation utilized to support testing, may be required in the performance of this contract.

**5.7 Period of Performance**

**5.7.1** The period of performance for this task order shall be 6 October 2005 through 5 October 2006.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 05	3. EFFECTIVE DATE 26-Apr-2005	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X	10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand051376 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)		16C. DATE SIGNED 26-Apr-2005

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## SUMMARY OF CHANGES

Task Order 0001 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>FROM</u>	<u>BY</u>	<u>TO</u>
Estimated Cost	\$1,376,000	\$231,000	\$1,607,000
Fixed Fee	113,753	19,000	132,753
CPFF	\$1,489,753	\$250,000	\$1,739,753

2. As of the date of execution of this modification, there has been allotted the sum of \$1,739,753. The balance to fully fund this task order is \$2,003,088. The total funding shall provide for performance of approximately 46% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000108, ACRN AH in the amount of \$250,000  
 AH 9750400 8ABF 253 SA452 0 068342 2D 054060 0302A0000000 \$250,000  
 Purchase Request Number - 0010137877  
 CIN - 001013787700001  
 Document Number - N0002405WX12207  
 CSS IWP - 310212004055659

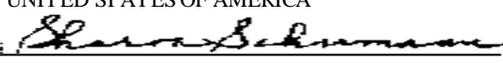
## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000101	ACRN: AA	\$ 74,000.00
SUB-CLIN 000102	ACRN: AB	\$ 79,502.96
SUB-CLIN 000103	ACRN: AC	\$ 00.00
SUB-CLIN 000101	ACRN: AA	\$ 26,250.04
SUB-CLIN 000102	ACRN: AB	\$ 250,000.00

4. Statement of Work paragraph 5.7.1 (Order 0001 Modification 04) is corrected to read as follows - " The period of performance for this task order shall be 6 October 2004 through 5 October 2005."

All other terms and conditions remain the same.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 06	3. EFFECTIVE DATE 31-May-2005	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CODE CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X	10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand051593 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) SHARON SCHUMANN / PROCURING CONTRACTING OFFICER TEL: (805) 989-4603 EMAIL: sharon.schumann@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY:  (Signature of Contracting Officer)		16C. DATE SIGNED 31-May-2005

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## SUMMARY OF CHANGES

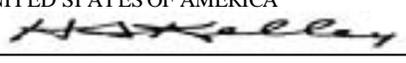
The purpose of this modification is to correct the "Summary for Payment Office" provided in N6893604D0026 Task Order 0001 Modification 05 as follows –

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 00.00
SUB-CLIN 000107	ACRN: AG	\$ 26,250.04
SUB-CLIN 000108	ACRN: AH	\$ 250,000.00

All other terms and conditions remain the same.

(End of Summary of Changes)

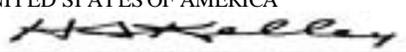
AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 07	3. EFFECTIVE DATE 21-Sep-2005	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CODE CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X	10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual agreement of the parties. Ref: jgriffith@photon.com email dtd 15 Sep 05.					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand052411 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil		
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY 		16C. DATE SIGNED 21-Sep-2005
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

Summary of Changes

The purpose of this modification is to extend the period of performance through 31 March 2006 at no additional cost to the government. All other terms and conditions remain the same.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 08	3. EFFECTIVE DATE 28-Oct-2005	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X	10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694		FACILITY CODE			
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12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand06211 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)		16C. DATE SIGNED 28-Oct-2005

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0001 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>FROM</u>	<u>BY</u>	<u>TO</u>
Estimated Cost	\$1,607,000	\$92,370	\$1,699,370
Fixed Fee	132,753	7,630	140,383
CPFF	\$1,739,753	\$100,000	\$1,839,753

2. As of the date of execution of this modification, there has been allotted the sum of \$1,839,753. The balance to fully fund this task order is \$1,903,088. The total funding shall provide for performance of approximately 49% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000109, ACRN AJ in the amount of \$100,000  
 AJ 97X4930 NH2C 252 77777 0 054219 2F 000000 011308750120 \$100,000  
 Purchase Request Number – 0010152794  
 CIN - 001015279400001  
 Document Number – N0002405WX11270  
 CSS IWP - 310212004055659

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 00.00
SUB-CLIN 000107	ACRN: AG	\$ 26,250.04
SUB-CLIN 000108	ACRN: AH	\$ 250,000.00
SUB-CLIN 000109	ACRN: AJ	\$ 100,000.00

All other terms and conditions remain the same.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 09	3. EFFECTIVE DATE 10-Jan-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CODE CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		7. ADMINISTERED BY (If other than item 6) CODE DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001		
			X 10B. DATED (SEE ITEM 13) 06-Oct-2004		
CODE 7N694		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand06675 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Henry G Kelley</u> (Signature of Contracting Officer)		16C. DATE SIGNED 10-Jan-2006

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0001 under Contract N68936-04-D-0026 is modified to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>FROM</u>	<u>BY</u>	<u>TO</u>
Estimated Cost	\$1,699,370	\$184,739	\$1,884,109
Fixed Fee	140,383	15,261	155,644
CPFF	\$1,839,753	\$200,000	\$2,039,753

2. As of the date of execution of this modification, there has been allotted the sum of \$2,039,753. The balance to fully fund this task order is \$1,703,088. The total funding shall provide for performance of approximately 54% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000110, ACRN AK in the amount of \$200,000  
 AK 97X4930 NH2C 252 77777 0 054219 2F 000000 011629181650 \$200,000  
 Purchase Request Number – 0010162181  
 CIN - 001016218100001  
 Document Number – N0002405WX51079  
 CSS IWP - 310212004055659  
 FMS Country – Japan, Case Number JA-P-BGQ

The funds above are for support of various Foreign Military Sales countries. Costs accumulated for the individual FMS country shall be segregated, reported, and billed at the individual ACRN.

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 00.00
SUB-CLIN 000107	ACRN: AG	\$ 26,250.04
SUB-CLIN 000108	ACRN: AH	\$ 250,000.00
SUB-CLIN 000109	ACRN: AJ	\$ 100,000.00
SUB-CLIN 000110	ACRN: AK	\$ 200,000.00

All other terms and conditions remain the same.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 10	3. EFFECTIVE DATE 14-Feb-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001		
			X 10B. DATED (SEE ITEM 13) 06-Oct-2004		
CODE 7N694		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual agreement of the parties. Ref: PRA letter AQ 101/0001 dated 2 Feb 2006					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand06936 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Henry Kelley</u> (Signature of Contracting Officer)		16C. DATE SIGNED 14-Feb-2006

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0001 under Contract N68936-04-D-0026 is modified to provide incremental funding and to revise the period of performance.

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>FROM</u>	<u>BY</u>	<u>TO</u>
Estimated Cost	\$1,884,109	\$20,321	\$1,904,430
Fixed Fee	155,644	1,679	157,323
CPFF	\$2,039,753	\$22,000	\$2,061,753

2. As of the date of execution of this modification, there has been allotted the sum of \$2,061,753. The balance to fully fund this task order is \$1,681,088. The total funding shall provide for performance of approximately 55% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000111, ACRN AH in the amount of \$22,000  
 AH 9750400 8ABF 253 SA452 0 068342 2D 054060 0302A0000000 \$22,000 "Increase"  
 Purchase Request Number – 0010137877-0001  
 CIN - 001013787700002  
 Document Number – N0002405WX12207  
 CSS IWP - 310212004055659

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$ 60,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 00.00
SUB-CLIN 000107	ACRN: AG	\$ 26,250.04
SUB-CLIN 000108	ACRN: AH	\$ 250,000.00
SUB-CLIN 000109	ACRN: AJ	\$ 100,000.00
SUB-CLIN 000110	ACRN: AK	\$ 200,000.00
SUB-CLIN 000111	ACRN: AH	\$ 22,000.00

4. The period of performance of this order is revised from 6 October 2004 through 31 March 2006 to 6 October 2004 through 1 September 2006.

All other terms and conditions remain the same.

End of Summary of Changes

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 11	3. EFFECTIVE DATE 13-Mar-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: H. KELLEY (805) 989-1943 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X	10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand061149 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Henry Kelley</u> (Signature of Contracting Officer)		16C. DATE SIGNED 13-Mar-2006

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0001 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>From</u>	<u>By</u>	<u>To</u>
Estimated Cost	\$1,904,430	\$323,804	\$2,228,234
Fixed Fee	157,323	26,196	183,519
CPFF	\$2,061,753	\$350,000	\$2,411,753

2. As of the date of execution of this modification, there has been allotted the sum of \$2,411,753. The balance to fully fund this task order is \$1,331,088. The total funding shall provide for performance of approximately 64% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000112, ACRN AL in the amount of \$250,000  
 AL 9760400 8ABF 253 SA452 0 068342 2D 054060 0302A0000000 \$250,000  
 Purchase Request Number – 0010169299  
 CIN - 001016929900001  
 Document Number – N0002406WX12466  
 CSS IWP – 20060 22100 03583

SUB-CLIN 000113, ACRN AK in the amount of \$100,000  
 AK 97X4930 NH2C 252 7777 0 054219 2F 000000 011629181650 \$100,000 “Increase”  
 Purchase Request Number – 0010162181-0001  
 CIN - 001016218100002  
 Document Number – N0002405WX51079  
 CSS IWP – 20060 22100 03583

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 00.00
SUB-CLIN 000107	ACRN: AG	\$ 26,250.04
SUB-CLIN 000108	ACRN: AH	\$ 250,000.00
SUB-CLIN 000109	ACRN: AJ	\$ 100,000.00
SUB-CLIN 000110	ACRN: AK	\$ 200,000.00
SUB-CLIN 000111	ACRN: AH	\$ 22,000.00
SUB-CLIN 000112	ACRN: AL	\$ 250,000.00
SUB-CLIN 000113	ACRN: AK	\$ 100,000.00

All other terms and conditions remain the same.

End of Summary of Changes

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 12	3. EFFECTIVE DATE 30-Mar-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049		CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X	10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand061281 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Henry Kelley</u> (Signature of Contracting Officer)		16C. DATE SIGNED 30-Mar-2006

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0001 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>From</u>	<u>By</u>	<u>To</u>
Estimated Cost	\$2,228,234	\$89,619	\$2,317,853
Fixed Fee	183,519	7,381	\$190,900
CPFF	\$2,411,753	\$97,000	\$2,508,753

2. As of the date of execution of this modification, there has been allotted the sum of \$2,508,753. The balance to fully fund this task order is \$1,234,088. The total funding shall provide for performance of approximately 67% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000114, ACRN AM in the amount of \$97,000  
 AM 97X4930 NH2C 252 77777 0 054219 2F 000000 011335110281 \$97,000  
 Purchase Request Number – 0010172751  
 CIN - 001017275100001  
 Document Number – N0002405WX11139  
 CSS IWP – 81788 54433 36598

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 00.00
SUB-CLIN 000107	ACRN: AG	\$ 26,250.04
SUB-CLIN 000108	ACRN: AH	\$ 250,000.00
SUB-CLIN 000109	ACRN: AJ	\$ 100,000.00
SUB-CLIN 000110	ACRN: AK	\$ 200,000.00
SUB-CLIN 000111	ACRN: AH	\$ 22,000.00
SUB-CLIN 000112	ACRN: AL	\$ 250,000.00
SUB-CLIN 000113	ACRN: AK	\$ 100,000.00
SUB-CLIN 000114	ACRN: AM	\$ 97,000.00

All other terms and conditions remain the same.

End of Summary of Changes

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 13	3. EFFECTIVE DATE 26-Apr-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X 10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand061443 See page two.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Henry G Kelley</u>		16C. DATE SIGNED 26-Apr-2006
(Signature of person authorized to sign)		(Signature of Contracting Officer)		

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0001 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>From</u>	<u>By</u>	<u>To</u>
Estimated Cost	\$2,317,853	\$184,782	\$2,502,635
Fixed Fee	190,900	15,218	206,118
CPFF	\$2,508,753	\$200,000	\$2,708,753

2. As of the date of execution of this modification, there has been allotted the sum of \$2,708,753. The balance to fully fund this task order is \$1,034,088. The total funding shall provide for performance of approximately 72% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000115, ACRN AH in the amount of \$200,000  
 AH 9750400 8ABF 253 SA452 0 068342 2D 054060 0302A0000000 \$200,000 "Increase"  
 Purchase Request Number – 0010175646  
 CIN - 001017564600001  
 Document Number – N0002405WX12207  
 CSS IWP – 81788 54433 36598

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 00.00
SUB-CLIN 000107	ACRN: AG	\$ 26,250.04
SUB-CLIN 000108	ACRN: AH	\$ 250,000.00
SUB-CLIN 000109	ACRN: AJ	\$ 100,000.00
SUB-CLIN 000110	ACRN: AK	\$ 200,000.00
SUB-CLIN 000111	ACRN: AH	\$ 22,000.00
SUB-CLIN 000112	ACRN: AL	\$ 250,000.00
SUB-CLIN 000113	ACRN: AK	\$ 100,000.00
SUB-CLIN 000114	ACRN: AM	\$ 97,000.00
SUB-CLIN 000115	ACRN: AH	\$ 200,000.00

All other terms and conditions remain the same.

End of Summary of Changes

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 14	3. EFFECTIVE DATE 30-May-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
			X 10B. DATED (SEE ITEM 13) 06-Oct-2004	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand061648 See page two.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) HENRY G KELLEY / PROCUREMENT CONTRACTING OFFICE TEL: (805) 989-1943 EMAIL: henry.kelley@navy.mil	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Henry G Kelley</u>		16C. DATE SIGNED 30-May-2006
(Signature of person authorized to sign)		(Signature of Contracting Officer)		

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0001 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>From</u>	<u>By</u>	<u>To</u>
Estimated Cost	\$2,502,635	\$161,683	\$2,664,318
Fixed Fee	206,118	13,317	219,435
CPFF	\$2,708,753	\$175,000	\$2,883,753

2. As of the date of execution of this modification, there has been allotted the sum of \$2,883,753. The balance to fully fund this task order is \$859,088. The total funding shall provide for performance of approximately 77% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000116, ACRN AN in the amount of \$175,000  
 AN 97X4930 NH2C 252 77777 0 054219 2F 000000 011744560744 \$175,000  
 Purchase Request Number – 0010178788  
 CIN - 001017878800001  
 Document Number – N0002406WX12122  
 CSS IWP – 81788 54433 36598

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 00.00
SUB-CLIN 000107	ACRN: AG	\$ 26,250.04
SUB-CLIN 000108	ACRN: AH	\$ 250,000.00
SUB-CLIN 000109	ACRN: AJ	\$ 100,000.00
SUB-CLIN 000110	ACRN: AK	\$ 200,000.00
SUB-CLIN 000111	ACRN: AH	\$ 22,000.00
SUB-CLIN 000112	ACRN: AL	\$ 250,000.00
SUB-CLIN 000113	ACRN: AK	\$ 100,000.00
SUB-CLIN 000114	ACRN: AM	\$ 97,000.00
SUB-CLIN 000115	ACRN: AH	\$ 200,000.00
SUB-CLIN 000116	ACRN: AN	\$ 175,000.00

All other terms and conditions remain the same.

End of Summary of Changes

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 15	3. EFFECTIVE DATE 04-Aug-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
CODE 7N694			X 10B. DATED (SEE ITEM 13) 06-Oct-2004	
FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual agreement of the parties. Ref: jgriffith@photon.com email dtd 26 Jul 06.				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand062063 See page two.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) JOHN R DAVIDSON / CONTRACT SPECIALIST TEL: (805) 989-8541 EMAIL: john.r.davidson@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>John R. Davidson</i>	16C. DATE SIGNED 04-Aug-2006
(Signature of person authorized to sign)			(Signature of Contracting Officer)	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

Summary of Changes

The period of performance of this order is revised from 6 October 2004 through 1 September 2006 to 6 October 2004 through 30 September 2006.

End of Summary of Changes

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 16	3. EFFECTIVE DATE 06-Nov-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0001	
CODE 7N694			X 10B. DATED (SEE ITEM 13) 06-Oct-2004	
FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual agreement of the parties. Ref: jgriffith@photon.com email of 27 Oct 06.				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand07195 See page two.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) JOHN R DAVIDSON / PROCURING CONTRACTING OFFICER TEL: (805) 989-8541 EMAIL: john.r.davidson@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA BY <i>John R. Davidson</i> (Signature of Contracting Officer)
(Signature of person authorized to sign)				16C. DATE SIGNED 06-Nov-2006

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0001 under Contract N68936-04-D-0026 is modified to **decrease** incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is **decreased** as follows:

	<u>From</u>	<u>By</u>	<u>To</u>
Estimated Cost	\$2,664,318	\$309,762	\$2,354,556
Fixed Fee	219,435	25,512	193,923
CPFF	\$2,883,753	\$335,274	\$2,548,479

2. As of the date of execution of this modification, there has been allotted the sum of \$2,548,479. No further funding is required in support of this order.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000112, ACRN AL in the amount of \$241,679

AL 9760400 8ABF 253 SA452 0 068342 2D 054060 0302A0000000 \$241,679 - **Decrease**

Purchase Request Number – 0010169299-0001

CIN - 001016929900001

Document Number – N0002406WX12466

CSS IWP – 81788 54433 36598

SUB-CLIN 000116, ACRN AN in the amount of \$93,595

AN 97X4930 NH2C 252 77777 0 054219 2F 000000 011744560744 \$93,595 - **Decrease**

Purchase Request Number – 0010178788-0001

CIN - 001017878800001

Document Number – N0002406WX12122

CSS IWP – 81788 54433 36598

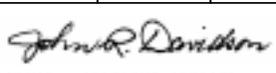
## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$ 150,000.00
SUB-CLIN 000102	ACRN: AB	\$ 100,000.00
SUB-CLIN 000103	ACRN: AC	\$1,060,000.00
SUB-CLIN 000104	ACRN: AD	\$ 74,000.00
SUB-CLIN 000105	ACRN: AE	\$ 79,502.96
SUB-CLIN 000106	ACRN: AF	\$ 00.00
SUB-CLIN 000107	ACRN: AG	\$ 26,250.04
SUB-CLIN 000108	ACRN: AH	\$ 250,000.00
SUB-CLIN 000109	ACRN: AJ	\$ 100,000.00
SUB-CLIN 000110	ACRN: AK	\$ 200,000.00
SUB-CLIN 000111	ACRN: AH	\$ 22,000.00
SUB-CLIN 000112	ACRN: AL	<b>\$ 8,321.00</b>
SUB-CLIN 000113	ACRN: AK	\$ 100,000.00
SUB-CLIN 000114	ACRN: AM	\$ 97,000.00
SUB-CLIN 000115	ACRN: AH	\$ 200,000.00
SUB-CLIN 000116	ACRN: AN	<b>\$ 81,405.00</b>

All other terms and conditions remain the same.

End of Summary of Changes

# ORDER FOR SUPPLIES OR SERVICES

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. N68936-04-D-0026		2. DELIVERY ORDER/ CALL NO. 0002		3. DATE OF ORDER/ CALL (YYYYMMDD) 2006 Sep 28		4. REQ./ PURCH. REQUEST NO. 0010183120-0001		5. PRIORITY	
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049				7. ADMINISTERED BY (if other than 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		SCD: C		8. DELIVERY FOB <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER  (See Schedule if other)	
9. CONTRACTOR NAME PHOTON RESEARCH ASSOC INC AND WM. JERRY GRIFFITH ADDRESS 5720 OBERLIN DR SAN DIEGO CA 92121-1723		CODE 7N694		FACILITY		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) <b>SEE SCHEDULE</b>		11. MARK IF BUSINESS IS <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED	
12. DISCOUNT TERMS		13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Item 15							
14. SHIP TO  <b>SEE SCHEDULE</b>		CODE		15. PAYMENT WILL BE MADE BY DFAS - COLUMBUS CENTER WEST ENTITLEMENT OPERATIONS PO BOX 182381 COLUMBUS OH 43218-2381		CODE HQ0339		MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.	
16. TYPE OF ORDER	DELIVERY/ CALL	<input checked="" type="checkbox"/>	This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.						
	PURCHASE	<input type="checkbox"/>	Reference your quote dated Furnish the following on terms specified herein. REF:						
ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.									
NAME OF CONTRACTOR			SIGNATURE			TYPED NAME AND TITLE			DATE SIGNED (YYYYMMDD)
<input type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:									
17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE  <b>See Schedule</b>									
18. ITEM NO.	19. SCHEDULE OF SUPPLIES/ SERVICES				20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE		23. AMOUNT
<b>SEE SCHEDULE</b>									
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.		24. UNITED STATES OF AMERICA TEL: (805) 989-8541 EMAIL: john.r.davidson@navy.mil BY: JOHN R DAVIDSON						25. TOTAL	\$4,250,000.00
26. DIFFERENCES									
27a. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED									
b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE					c. DATE (YYYYMMDD)		d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		
e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE					28. SHIP NO.	29. DO VOUCHER NO.	30. INITIALS		
f. TELEPHONE NUMBER		g. E-MAIL ADDRESS			<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	32. PAID BY		33. AMOUNT VERIFIED CORRECT FOR	
36. I certify this account is correct and proper for payment.					31. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL			34. CHECK NUMBER	
a. DATE (YYYYMMDD)	b. SIGNATURE AND TITLE OF CERTIFYING OFFICER								35. BILL OF LADING NO.
37. RECEIVED AT		38. RECEIVED BY		39. DATE RECEIVED (YYYYMMDD)	40. TOTAL CONTAINERS	41. S/R ACCOUNT NO.	42. S/R VOUCHER NO.		

## Section B - Supplies or Services and Prices

This order is determined to be severable.

ITEM NO	SUPPLIES/SERVICES	MAX AMOUNT
0001	Ballistic Missile Defense Engineering Services CPFF – Contract N68936-04-D-0026, Task Order 0002. Provide engineering services for Ballistic Missile Defense.	
	Cost	\$3,926,747
	Fixed Fee	323,253
	CPFF	\$4,250,000
0002	Data	NSP

Payment of Fixed Fee

Subject to the withholding provisions of the clause at FAR 52.216-8 entitled “Fixed Fee”, the fixed fee specified shall be paid at the rate of 8.250% of all costs expended during each vouchering period, provided, however, that the total fee payable shall not exceed the fee established in the task order.

Funding

This severable task order is funded in the amount of \$185,000. \$170,929 is allocated for cost and \$14,071 is allocated for fee. The total allotted funding will provide for performance of approximately 4% of the total effort. The specific accounting and appropriation data applicable to this order is:

SUB-CLIN 000101, ACRN AA in the amount of \$185,000  
AA 97X4930 NH2C 252 77777 0 054219 2F 000000 011744560744 \$185,000  
Purchase Requisition Number 0010183120-0001  
CIN - 001018312000001  
Document Number N0002406WX12122  
CSS IWP Number – 81788 54433 36598

Summary for Payment Office

SUBCLIN 000101 ACRN AA \$185,000

Level of Effort

The estimated level of effort for this order is 24,754 direct labor hours. The composition of hours is as follows:

Labor Category	Hours
Sr Tech Spec	Ex b(4)
Assoc DTS Spec	Ex b(4)
Assoc Security Spec	Ex b(4)
Assoc Tech Specialist	Ex b(4)
DTD Specialist	Ex b(4)
IT Specialist	Ex b(4)
Prin Tech Specialist	Ex b(4)
Security Specialist	Ex b(4)
Sr Prog Tech Direc	Ex b(4)
Sr SW Specialist	Ex b(4)
P-Sr Tech Spec	Ex b(4)
Subject Matter Expert	Ex b(4)
Tech Specialist	Ex b(4)
Total	24,754

Scope

The scope of this task order is contained in Attachment (1), Statement of Work.

Inspection and Acceptance

Inspection and acceptance will be performed at destination by the Contracting Officer’s Representative (COR).

Period of Performance

The period of performance for this task order is 1 October 2006 through 31 March 2008.

Quality Assurance Surveillance Plan (QASP)

Deliverables shall be reviewed by the Technical Assistant and provide an assessment to the Contract Specialist upon completion of the order in accordance with the QASP. The contractor's performance of the requirements is subject to the inspection and acceptance clauses found in Section E of the Contract. Payment of the fixed fee will be in accordance with the QASP.

Contracting Officer's Representative (COR)

The COR is responsible for monitoring the performance and progress as well as overall technical management of this order and should be contacted regarding questions or problems of a technical nature. In no event, however, shall any understanding or agreement, modification, change order, or other matter deviating from the terms of the order between the Contractor and any person other than the Contracting/Ordering Officer be effective or binding upon the Government unless formalized by the proper contractual documents executed by the Contracting/Ordering Officer prior to completion of this task order.

When, in the opinion of the Contractor, the COR requests effort outside the scope of the order, the Contractor shall promptly notify the Contracting/Ordering Officer in writing. No action will be taken by the Contractor under such technical instruction unless the Contracting/Ordering Officer has issued an order change. On all problems that pertain to the contract or order terms, the Contractor shall contact the Contracting/Ordering Officer.

The designated COR is:

Name: Ex b(6)  
Address: Naval Air Warfare Center Weapons Division  
575 I Avenue, Suite 1  
Point Mugu, CA 93042-5000  
Code: 4K9300E  
E-mail: Ex b(6)  
Phone: 805/ Ex b(6)

Deliverables

Deliverables will be in accordance with the Contract Data Requirements List (CDRL), DD 1423.

Travel

All requests for travel shall be submitted in writing to the COR for approval at least two weeks prior to planned commencement of travel. Costs associated with any travel not approved in advance by the COR will be disallowed.

Material

Purchase of material with a unit cost of \$5,000 or less does not require prior government approval.

STATEMENT OF WORK  
TASK ORDER 2

**Ballistic Missile Defense (BMD) Engineering Services**

**1.0 INTRODUCTION.**

1.1 **BACKGROUND.** The mission of the Naval Air Warfare Center Weapons Division (NAVAIR WD), Point Mugu, CA, is to be the Navy's full-spectrum Research, Development, Test and Evaluation (RDT&E), and In-service Engineering Center for weapons systems associated with Naval warfare, missiles and missile subsystems and supporting systems, weapons integration, and assigned electronic warfare systems. This responsibility includes performing Developmental and Operational Testing and Evaluation (DOT&E); full operational support and planning for each operation; coordination of post-exercise analysis; and support for Naval Surface Weapons Anti-Air Warfare (AAW) T&E operations and fleet exercises throughout the United States.

1.2 **MISSION.** The mission of the Missile Defense Agency (MDA) under the Office of the Secretary of Defense (OSD) is to develop and field an integrated ballistic Missile Defense System (BMDS) capable of providing a layered defense for the United States and its deployed forces, friends and allies against ballistic missiles of all ranges in all phases of flight. MDA is responsible for research, development, testing and evaluation. Using complementary interceptors, sensors, and Battle Management Command and Control Systems, the planned missile defense system will be able to engage all classes and ranges of ballistic missile threats. Missile defense elements being developed and tested by MDA are primarily based on a hit-to-kill technology.

One of the weapon systems elements presently under development as part of the MDA strategy is to deploy sea-based interceptors to defend against ballistic missile target threats. The Navy's Aegis Ballistic Missile Defense (BMD), program will provide protection against medium/long-range ballistic missile threats for vital political and military assets based on available Sea Room and Ship Operating Areas. The Aegis BMD system requirements are to conduct engagements with STANDARD Missile 3 (SM-3) intercept missiles of exo-atmospheric ballistic missile threats in the ascending phase after launch, near apogee during mid-course along the trajectory, and during the descent phase near impact. The Navy Theater Wide (NTW) Program builds on the Navy's Aegis Leap Intercept (ALI) and NTW testing of the Aegis Weapon System (AWS) and the SM-3. The NTW design assumes completion of Navy modifications to the AWS including weapons control, SPY-1 Radar, Command and Control Systems, and the SM-3. These modifications when completed will be known as the Aegis BMDS Block 2004 configuration.

Another weapon system element that is a part of the MDA concept is the Theater High-Altitude Area Defense (THAAD) program. THAAD is an endo-/exo-atmospheric system that will destroy a ballistic missile as it transitions from the mid-course to terminal phase of its trajectory. The THAAD system is comprised of an interceptor and the TMD Ground Based Radar (GBR) surveillance and tracking sensor.

This support includes a series of planned demonstrations leading up to Developmental Test/Operational Test (DT/OT) for an integrated BMD system.

1.3 **SCOPE.** This statement of work (SOW) covers engineering services to be provided to the NAVAIR WD, Point Mugu, CA. Services to be provided are in support of Test and Evaluation (T&E) and systems engineering activities related to Aegis BMD and THAAD Programs at PMRF. Tasking includes Operations Research Support, Physics Analysis, Test Plans and Procedures, Test Data Collection Analysis and Test Data Review, Test Monitoring and Real-Time Mission Support, Program Management Support, Management Reports and Briefing Preparations. Support shall be provided at various national test ranges as required including the Pacific Missile Range Facility (PMRF), Barking Sands, Kauai, HI.

- 1.4 **PERFORMANCE BASED.** This statement of work is performance based and all associated work shall be performed in accordance with the Quality Assurance Surveillance Plan.
- 1.5 **PERIOD OF PERFORMANCE.** The period of performance of this task order shall be from 1 October 2006 through 31 March 2008 to cover FTM-11 Tracking exercise currently scheduled for November 2006, FTM-11 Intercept exercise in December 2006, FTM-12 Tracking exercise in June 2007, FTM-12 Intercept exercise in June 2007, FTM-13 Tracking exercise in November 2007, FTM-13 Intercept exercise in November 2007, JFM-1 exercise in December 2007, other missions as requested, pre-mission planning support at PMRF and all post-mission analysis. Exercise dates are subject to change by the BMD Program Executive Office.

## **2.0 APPLICABLE DOCUMENTS**

The following list of documents will be made available, if required by the contractor, to perform the tasks defined in this contract, and is not intended to be all-inclusive, but is given as a point of reference. Additional applicable documents will be provided as required.

- 2.1 System Specification Navy Area, Theater Ballistic Missile Defense (TBMD) Systems Requirements Document (U), dated 13 March 1999
- 2.2 TEMP 1459-1 Test & Evaluation Master Plan Number 1459-1 for the Navy Theater Wide (NTW) TBMD, dated Sep 1998
- 2.3 DOD 5000.e Test and Evaluation
- 2.4 OPNAVINST 3960-10 Test and Evaluation
- 2.5 Aegis Ballistic Missile Defense Flight Mission (FM) Test Plan

- 3.0 REQUIREMENTS.** The Government will provide the Contractor format requirements, GFI engineering source data, and tasking due dates via individual work authorizations. Contractor format is authorized except in cases where the Government will define the format via individual work authorizations.

## **3.1 Task Area A--Operations Research Support.**

- 3.1.1 The Contractor shall perform technical analyses related to the performance of land based, sea-based, airborne, and space-based electro-optical sensor systems including National Means Sensors (NMS). This effort will include assessing target detectability (with respect to expected thresholds for the sensor), identification and discrimination ensuring that the experiment is planned so as to be consistent with sensor systems constraints (e.g. background issues, sensor locations, etc.). Analyses will include sensor data fusion and correlation. This effort will build on the analysis products developed during extended tracking and control exercise (ET&CE) and the Aegis BMD FM-2, -3, -4, -5, -6, -7, -8, and -10 missions. Basic contract SOW paragraph 3.1.1 applies.
- 3.1.2 The Contractor shall develop, evaluate, and/or execute threat models to predict the InfraRed (IR) signatures of Navy BMD threats. The models shall include sensitivities of model predictions to parameters, and infrared characterization and modeling of various taxonomies. The Contractor shall assess and validate the model results using Government furnished measurement data to determine if the models accurately predict IR BMD threat signatures for target identification and potential applications to target discrimination. Basic contract SOW paragraph 3.1.2 applies.
- 3.1.3 The Contractor shall assess, apply, and adapt Government furnished discrimination algorithms to BMD threat systems to assist in the development of IR seeker Target Object Map (TOM) functions. This will include algorithms that exploit mean intensity, multicolor temperature-based features, and temporal-based

features. Complementary information from multiple sources to assess target/interceptor events shall include metric accuracy data (the difference between measured and truth trajectory) and signature fusion. A discrimination solution for a particular system shall be tailored to the system threat, sensor design, and available processing power. The total solution for an interceptor can incorporate narrow band or wide band radar information, metric information, and optical radiometric data. Basic contract SOW paragraph 3.1.3 applies.

- 3.1.4 The Contractor shall adapt the Battlespace Environmental Signatures Toolkit (BEST), and its supporting databases to the BMD requirements. The model shall produce IR scenes for use in seeker evaluations and real-time hardware-in-the-loop simulations. Basic contract SOW paragraph 3.1.4 applies.
- 3.1.5 The Contractor shall analyze the IR seeker to determine the system performance during engagements. Analysis shall include detection, tracking, discrimination, and aim point selection. The Contractor shall provide recommendations for any improvements based on the analysis. Basic contract SOW paragraph 3.1.5 applies.
- 3.1.6 The Contractor shall define optimum electro-optical sensor data distribution architecture methods for near-real-time application based on web technology and provide recommendations. The Contractor shall analyze and evaluate data management, dissemination, and processing architectures for the various separate and collective optical sensors. The objective is to develop and demonstrate that the infrastructure is in place that will enable the sensor systems to meet overall test mission objectives and requirements. This will include addressing the post-mission data collection, conditioning, dissemination (including bandwidth, timelines, latency, etc.), display, processing, exploitation, storage archiving, and information delivery to the government selected sites and/or other appropriate organizations. The objective of this task is to ensure the overall capability of the integrated range operations to meet the data product requirements and informational needs of the Navy, as well as other service programs using the PMRF range/test facilities. Basic contract SOW paragraph 3.1.6 applies.
- 3.1.7 The Contractor shall provide data analysis of the target intercepts based on the electro-optical and radar sensor data collected during the Aegis FM mission testing. Data analysis will include sensor fusion and correlation from multiple sources. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment. Basic contract SOW paragraph 3.1.8 applies.
- 3.1.8 The Contractor shall provide technical support to NAVAIR WD Pt Mugu, Aegis BMD program office, and PMRF for the stabilized high-accuracy optical tracking system (SHOTS) optics testing/optical instrumentation for test mission support. Basic contract SOW paragraph 3.1.9 applies.
- 3.1.9 The Contractor shall provide technical simulations, analyses, and technical oversight to the Multi-Frame Blind De-Convolution (MFBD) program at PMRF. The Contractor shall also develop Figures of Merit (FOM) to quantitatively assess image quality improvement. Basic contract SOW paragraph 3.1.7 applies.

## **3.2 Task Area B--Physics Analyses.**

- 3.2.1 The Contractor shall analyze Government-furnished electro-optical data to assess the utility of data for supporting Aegis BMD system evaluations, evaluate the requirements for various types of electro-optical data, define a range of options for meeting the requirements, and provide recommendations, prioritized, of the options. The analyses shall include ground, mobile (ship-based, air-based), and space-based sensors and should consider both existing as well as potential systems. Advanced optical methods for sensing targets will be defined for future applications. Processing methods of hyper- spectral data and high frame rate data will be examined. Basic contract SOW paragraph 3.2.1 applies.
- 3.2.2 The Contractor shall review BMD test scenarios and ensure test requirements for optical systems provide for comprehensive optical data collections. The Contractor shall provide recommendations on how to best achieve comprehensive optical data collection. Waveband selection criteria will be developed by

conducting a computational search using the end to end radiometric model to define the band location and bandwidth which maximizes observed signal to noise ratio at typical acquisition ranges. Basic contract SOW paragraph 3.2.2 applies.

- 3.2.3 The Contractor shall demonstrate that discrimination of the target cloud can be made with optical data alone. The Contractor shall demonstrate the exploitation of optical data in the visible through LWIR regions. Optical signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment. Basic contract SOW paragraph 3.2.3 applies.
- 3.2.4 The Contractor shall analyze active optical methods and evaluate potential contributions of the data to BMD testing. These methods shall include incoherent and coherent laser radars and phenomenological issues related to optical propagation through the atmosphere. Basic contract SOW paragraph 3.2.4 applies.
- 3.2.5 The Contractor shall demonstrate the exploitation multi and hyperspectral optical signatures. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment. Basic contract SOW paragraph 3.2.5 applies.
- 3.2.6 The Contractor shall perform laser radar studies for advanced electro-optical sensor detection applications. Basic contract SOW paragraph 3.2.6 applies.
- 3.2.7 The Contractor shall investigate concepts and instrumentation techniques associated with developing optical sky screen capability to support target launch range safety requirements at PMRF. Basic contract SOW paragraph 3.2.7 applies.
- 3.2.8 The Contractor shall investigate photo-optical instrumentation techniques for supporting and covering target launches. Basic contract SOW paragraph 3.2.8 applies.

### **3.3 Task Area C--Test Plans and Procedures.**

- 3.3.1 The Contractor shall review mission scenarios and preliminary and final test plans/requirements and provide input and recommendations to meet Government test objectives. For scenarios the Contractor shall include a flow-down of test objectives to the scenario requirements, and detailed definition/planning of the test scenario including target type, presentation, trajectory and timing. The test plans/requirements shall address, as applicable, target presentations, characteristics of the required targets and their expected performance parameters, timing, engagement geometry, multiple targets, range safety issues. Coordination with all personnel associated with the test operations is also required including ship personnel, range personnel, and all personnel associated with supporting sensors, instrumentation requirements, data collection, target definition, preliminary and final mission firing plans, and test operations. This task will require establishing a technical interface with multiple activities so that there is a clear understanding at an operational level of the technical issues. This effort shall require coordination with organizations such as Missile Defense Agency, NAVSEASYS COM Program Executive Office Integrated Warfare Systems (PEO IWS), PMRF, Aegis BMD Program, United States Army Space and Missile Defense Command (USASMDC), Air Force Space Systems Division, Air Force Maui Optical Station (AMOS)/ Maui Space Surveillance Site (MSSS); PMRF; SPAWAR, Naval Surface Warfare Center (NSWC) Corona, and other non-Navy organizations that are involved in the Navy T&E efforts. Basic contract SOW paragraph 3.3.1 applies.
- 3.3.2 The Contractor shall identify and recommend targets for testing to meet Government test objectives. The Contractor shall define target selection criteria and assessment of potential targets against those criteria. The selection criteria would include: (a) the degree to which candidate targets are good surrogates for the threat targets; (b) availability of launch platforms and ranges to support the target launches; (c) cost and schedule constraints; and (d) environmental considerations. The Contractor shall determine if T&E objectives can be met against targets of opportunity (TOOs) rather than dedicated targets. The Contractor shall identify potential TOOs (including Missile Defense Agency tests, operational missile tests, and space launches), and

then correlate the sensor/test options associated with these targets against T&E objectives. Basic contract SOW paragraph 3.3.2 applies.

- 3.3.3 The Contractor shall define instrumentation requirements and data analysis products for BMD testing, and shall derive requirements for the data collection from all relevant sensors including: (a) telemetry from the targets and intercepting missiles; (b) tracking range radar support (independent of the AEGIS AN/SPY-1 radar); (c) photo-documentation sensors; (d) telescope sensors; and (e) ground-based and airborne, visible, Short Wave Infrared (SWIR), Mid-wave InfraRed (MWIR) and Long-wave InfraRed (LWIR) sensors. The Contractor shall identify existing tools for processing the data, identify any deficiencies, and correct these deficiencies by developing the necessary techniques to analyze the data. This process of identifying the final analysis products shall be incorporated into the test planning process. Mission test data from the AEGIS Weapons System shall also be included in the analyses. This will include collecting data necessary to support assessment of all aspects of system detection/control/engagements so that correlation can be made with data collected by electro-optical sensors and other telemetry (TM) and radar sources. This function also includes definition of collection requirements for range instrumentation and supporting sensors. The contractor shall identify data products required for post mission analyses in the DMAP (Data Management Analysis Plan prepared by NSWC Corona) that is prepared for each Aegis BMD mission. Basic contract SOW paragraph 3.3.3 applies.
- 3.3.4 The Contractor shall develop input for integrated test plans for utilizing ground, space, and mobile (air, sea) based optical sensor systems. Test plans will identify all test-planning procedures including pre-mission sensor testing, mission data collection, real-time data transmission, and post-mission data analysis. Test plans would also identify, among other things, specific data elements to be collected for data analysis, data products to be delivered, test limitations, communications, personnel, internal range readiness testing, simulations, target trajectory, and frequency management for data transmission. Basic contract SOW paragraph 3.3.4 applies.
- 3.3.5 The Contractor shall attend working group meetings as required for the Aegis BMD and THAAD programs including Instrumentation Working Groups (IWGs), Data Analysis Working Groups (DAWGs), Test and Evaluation Working Groups (TEWGs), Auxiliary Sensor Mission Readiness Reviews (ASMRRs) and other T&E planning meetings. Basic contract SOW paragraph 3.3.5 applies.
- 3.3.6 The Contractor shall develop input for Navy test and evaluation plans for evaluating mobile optics capabilities of the SHOTS on the MATSS platform and at PMRF. Basic contract SOW paragraph 3.3.6 applies.
- 3.3.7 The contractor shall develop input for a master integrated test plan that combines under one document all of the auxiliary sensor test conduct requirements including test support positions (TSPs), communication frequencies, call signs, sensor requirements, test procedures, range safety factors, personnel required and POC's at PMRF, test schedules for the readiness test preps including the mission, timeline for mission conduct, data to be collected, and required reports for T+4 hrs, T+96 hrs, and T+ 30/60 days. Basic contract SOW paragraph 3.3.7 applies.

### **3.4 Task Area D--Test Data Collection Analysis and Test Data Review.**

- 3.4.1 The Contractor shall edit and correlate Infrared field and flight test data for repeatability and comparability, including processing and analyzing data from a diverse number of sources, AEGIS radar data, telemetry, range radar data, satellite data, sea-based, ground-, air-, and space-based optical and video data and shall analyze these data on a data analysis workstation to ensure that test objectives were met. The Contractor shall prepare test reports that compile analysis results and summarize findings. The Contractor shall provide the Government copies of the test reports and data packages in both hard copy and digital media. Basic contract SOW paragraph 3.4.1 applies.

- 3.4.2 The Contractor will support the analysis of specific issues related to electro-optics data collection and optics mount and sensor issues including mission requirements analysis for mount and sensor assignments on workstations in the PMRF DAC. Data will be ingested from multiple optical sensor sources for data reduction and analysis using the Tirade software. Basic contract SOW paragraph 3.4.2 applies.
- 3.4.3 The Contractor shall provide briefs and demonstrations of the workstations used to reduce optical data from Aegis BMD missions as required. Basic contract SOW paragraph 3.4.3 applies.
- 3.4.4 The Contractor shall support the software development for data reduction and analysis of the electro-optical sensor mission data sets to improve overall efficiency and accuracy of test data analysis. Basic contract SOW paragraph 3.4.4 applies.

### **3.5 Task Area E--Test Monitoring and Real-Time Mission Support**

- 3.5.1 The Contractor shall attend test events to verify test requirements and procedures, monitor the test being conducted, and record test results/corrective actions as required. The Contractor shall report in real-time any observed problems and recommended corrective actions to the Government. Basic contract SOW paragraph 3.5.1 applies.
- 3.5.2 The Contractor shall assist in the development of an optical data analysis capability to support the reduction and analysis of optics data collected during test operations. Basic contract SOW paragraph 3.5.2 applies.
- 3.5.3 The Contractor shall provide real-time mission support for the collection of optics data. This effort shall include participation at the various optical mounts and sensor sites, as well as post-operation optics data reduction, analysis, and reporting. Basic contract SOW paragraph 3.5.3 applies.
- 3.5.4 The contractor shall provide support for test planning, test conduct, data reduction and analysis, and reporting of all electro-optical sensor data collected during critical mission counter measures and other flight test missions. Basic contract SOW paragraph 3.5.4 applies.

### **3.6 Task Area F--Program Management Support.**

- 3.6.1 The Contractor shall review and provide input for BMD program documents including but not limited to BMD Operational Requirements Document (ORD), the Test and Evaluation Master Plan (TEMP), the Aegis Ballistic Missile FM test plan, including the Integrated Test Plan (ITP), the Program Introduction (PI), and the Operational Requirement (OR) and Operational Directive (OD) for correctness, completeness, and determine if the documents meet Government objectives. This documentation will include the production of draft documents for Government review related to more detailed test plans. Basic contract SOW paragraph 3.6.1 applies.
- 3.6.2 The Contractor shall support the development of and provide input to a Program Support Plan and Flight Mission Test Plans to assist in identifying and ensuring that sensors meet the scenario test objectives and mission requirements. This will encompass determining the best use of optics and sensors, as well as the capabilities of auxiliary sensors to include but not be limited to the Stabilized High Accuracy Optical System (SHOTS) at PMRF and on the Mobile Aerial Target Support Ship (MATSS), Air Force Maui Optical Station (AMOS), the High Altitude Observatory (HALO I and II) aircraft sensors, including the Infrared Imaging System (IRIS), a the wide-body airborne sensor platform (WASP), and National Means Sensors. Basic contract SOW paragraph 3.6.2 applies.

### **3.7 Task Area G--Management Reports and Briefing Preparations.**

- 3.7.1 The Contractor using government furnished information (GFI) shall develop presentation materials such as digital images, view-graphs, slides, video tapes, and printed media in the form of reports, instructions, and other materials as required by program management in the support of tasking identified in section 3 of this

SOW. The media used shall be electronic or digital wherever practical and/or hard copy as required. Basic contract SOW paragraph 3.7.1 applies.

- 3.7.2 The Contractor shall prepare Monthly Activity and Status Reports to the Contracting Officer's Representative (COR) as specified in each TO. The format and content for the reports will be specified in each TO. The media used to convey the reports shall be electronic or digital wherever practical and/or hard copy as required. Basic contract SOW paragraph 3.7.2 applies.
- 3.7.3 The Contractor shall provide technical and engineering support at engineering reviews, T&E engineering planning and coordination meetings, T&E operational planning and coordination meetings at various locations relevant to the planning and conduct of BMD events. The contractor shall provide reviews and minutes of meetings attended. Basic contract SOW paragraph 3.7.3 applies.

#### **4.0 DATA DELIVERABLES**

- 4.1 Specific items of reports, test plans, procedures, technical support documentation, presentation materials, meeting minutes, and progress reports will be provided in accordance with Form DD-1423.
- 4.1.1 Technical Reports, IR Seeker Performance Analysis, in accordance with paragraph 3.1.5 (CDRL A003).
- 4.1.2 Technical Reports, Test Scenario and Requirements Analysis, in accordance with paragraphs 3.2.2 and 3.3.1 (CDRL A003).
- 4.1.3 Technical Reports, Target Definition Analysis, in accordance with paragraph 3.3.2 (CDRL A003).
- 4.1.4 Technical Reports, Instrumentation Requirements and Data Analysis Products, in accordance with paragraph 3.3.3 (CDRL A003).
- 4.1.5 Technical Report, Optical Sensor Systems Utilization, in accordance with paragraph 3.3.4 (CDRL A003).
- 4.1.6 Minutes/Reviews of meetings, in accordance with paragraph 3.3.5 (CDRL A002).
- 4.1.7 Technical Report, Mobile Optics Capabilities, in accordance with paragraph 3.3.6 (CDRL A003).
- 4.1.8 Technical Report, Auxiliary Sensor Test Requirements, in accordance with paragraph 3.3.7 (CDRL A003).
- 4.1.9 Technical Report, Infrared Field and Flight Test Data Analysis, in accordance with paragraph 3.4.1 (CDRL A003).
- 4.1.10 Presentation Materials, Optical Data Reduction Workstations, in accordance with paragraph 3.4.3 (CDRL A001).
- 4.1.11 Minutes/Reviews of meetings, in accordance with paragraph 3.5.1 (CDRL A002).
- 4.1.12 Technical Reports, BMD Requirements Documents Analysis, in accordance with paragraph 3.6.1 (CDRL A003).
- 4.1.13 Technical Reports, Program Support Plan, in accordance with paragraph 3.6.2 (CDRL A003).
- 4.1.14 Technical Reports, Flight Mission Test Plan, in accordance with paragraph 3.6.2 (CDRL A003).
- 4.1.15 Presentation materials in accordance with paragraph 3.7.1 (CDRL A001).
- 4.1.16 Periodic Status Reports in accordance with paragraph 3.7.2 (CDRL A004).

4.1.17 Minutes/reviews of meetings in accordance with paragraph 3.7.3 (CDRL A002).

## 5.0 SPECIAL CONSIDERATIONS.

5.1 Security. The Contractor shall perform work up to the level of SECRET in the performance of this contract in accordance with applicable DD-254.

5.2 Government Facility Access.

5.2.1 The Contractor will require access to Naval Base Ventura County (NBVC) restricted areas of the Industrial Areas at Point Mugu, CA.

5.2.2 The Contractor will require access to Pacific Missile Range Facility (PMRF) at Barking Sands, Kauai, HI.

5.2.3 The Contractor will require access to Maui Space Surveillance Site (MSSS) and Air Force Maui Optical Station (AMOS), Maui, HI.

5.2.4 The Contractor will require access to White Sands Missile Range (WSMR), NM.

5.2.5 After hours access may be required.

5.3 Government-Furnished Property. None.

5.4 Government-Furnished Data/Access.

5.4.1 The Contractor will be provided access to the data itemized in paragraph 2.2.

5.4.2 The Contractor will not be provided Government facilities workspace.

5.5 Travel.

5.5.1 All requests for travel will be submitted in writing to the Technical Assistant (TA) via the Contracting Officer's Representative (COR) for approval at least two (2) weeks prior to occurrence. Each travel request will include budgeted travel amount, projected cost for requested trip and balance remaining. Each travel request will itemize duration, airfare, and cost of lodging, per diem, car rental, miscellaneous and names of traveler(s). Travel in support of this task order is anticipated to be as follows:

TRIPS	PEOPLE	DAYS	FROM	TO
5	1	7	San Diego, CA	Huntsville, AL
5	1	5	San Diego, CA	Tucson, AZ
7	1	3	San Diego, CA	NBVC, CA
1	1	1	San Diego, CA	NBVC, CA
1	1	5	San Diego, CA	Colorado Springs, CO
2	1	5	San Diego, CA	Washington, DC
2	1	4	San Diego, CA	Washington, DC
2	1	3	San Diego, CA	Washington, DC
2	1	2	San Diego, CA	Washington, DC
2	1	5	San Diego, CA	Moorestown, NJ
10	2	11	San Diego, CA	Kauai, HI
4	2	10	San Diego, CA	Kauai, HI
3	2	5	San Diego, CA	Kauai, HI
6	1	4	San Diego, CA	Kauai, HI
10	1	4	San Diego, CA	Maui, HI

10	2	10	San Diego, CA	Maui, HI
4	4	11	San Diego, CA	Oahu, HI
2	4	4	San Diego, CA	Oahu, HI
1	4	6	San Diego, CA	Oahu, HI
2	1	3	San Diego, CA	Monterey, CA
1	1	5	San Diego, CA	Tokyo, Japan
2	1	5	San Diego, CA	Albuquerque, NM
1	1	11	Kauai, HI	Boston, MA
1	1	11	Kauai, HI	China Lake, CA
1	1	7	Kauai, HI	Huntsville, AL
1	1	4	Kauai, HI	Huntsville, AL
1	1	4	Kauai, HI	Los Angeles, CA
1	1	13	Kauai, HI	Washington, DC
4	2	2	Maui, HI	Kauai, HI
4	1	4	Maui, HI	San Diego, CA

5.6 Training. None.

5.7 Materials/Supplies.

5.7.1 Small value materials and supplies may be required in the performance of this Contract.

5.7.2 Materials in support of electro-optical/surveillance sensors including photo-optical and command and control and communication systems instrumentation utilized to support testing, may be required in the performance of this contract.

## 6.0 GOVERNMENT POINTS OF CONTACT.

### Contracting Officer's Representative (COR):

Ex b(6)

NAVAIR WD Code 518400E

Point Mugu, CA 93042-5049

Work: (805) Ex b(6)

FAX: (805) 989-0585

Cell: (805) Ex b(6)

e-mail: Ex b(6)

### Technical Assistant (TA):

Ex b(6)

NAVAIR WD Code 511200E

Point Mugu, CA 93042-5049

Work: (805) Ex b(6)

FAX: (805) 989-0585

Cell: (805) Ex b(6)

e-mail: Ex b(6)

1

All additional Government points of contact will be identified as required in each Task Order.

## 7.0 Quality Assurance Surveillance Plan

Performance Standard (Expectations)	Acceptable Quality Level	Inspection Type and Frequency	Incentive or Remedy
Appropriate SOW tasking is performed without causing programmatic delay to the government. All produces are submitted timely.	<b>Satisfactory:</b> Performance and deliverables meet the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Performance and deliverables result in moderate delay or impact to the program.	Each category will be evaluated every six (6) months and will be based upon government teammates' evaluations conducted throughout the performance period. The overall performance rating will be assigned by the Task Order Manager (TOM) and subject to COR approval.	<b>Satisfactory:</b> 100% fee <b>Marginal:</b> 50% fee <b>Unsatisfactory:</b> 0% fee
Analysis methodology and deliverables are consistent, reflective of sound industry practices, and data deliverables are clear, concise, thorough and complete in accordance with (IAW) referenced CDRLs.	<b>Unsatisfactory:</b> Performance and deliverables result in unacceptable delay or impact to the program.		
Management and teaming allow seamless integration among government and contractor teammates. The contractor takes a proactive role in resolving issues. Issues identified by the government are addressed and resolved in a timely fashion.	<b>Satisfactory:</b> Performance meets the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Performance leaves many questionable situations for government resolution. <b>Unsatisfactory:</b> Teaming is discordant and the contractor is not proactive.		
Costs incurred and hours expended is commensurate with the services performed and products delivered, translating into value to the government. All funding and cost status reports are accurate and complete and submitted in accordance with contract requirements.	<b>Satisfactory:</b> Contractor meets the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Contractor's expenditure of costs and hours are sometimes not appropriate for the performance and deliverables provided. <b>Unsatisfactory:</b> Contractor's expenditure of costs and hours are not appropriate for the performance and deliverables provided.		

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 01	3. EFFECTIVE DATE 12-Oct-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand0775 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) JOHN R DAVIDSON / PROCURING CONTRACTING OFFICER TEL: (805) 989-8541 EMAIL: john.r.davidson@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)		16C. DATE SIGNED 11-Oct-2006	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0002 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>FROM</u>	<u>BY</u>	<u>TO</u>
Estimated Cost	\$170,929	\$60,668	\$231,597
Fixed Fee	14,071	4,994	19,065
CPFF	\$185,000	\$65,662	\$250,662

2. As of the date of execution of this modification, there has been allotted the sum of \$250,662. The balance to fully fund this task order is \$3,999,338. The total funding shall provide for performance of approximately 5% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000102, ACRN AB in the amount of \$65,662  
 AB 9760400 8ABF 255 SA452 0 068342 2D 054060 0302A0000000 \$65,662  
 Purchase Request Number – 0010192029  
 CIN - 001019202900001  
 Document Number – N0002406WX13429  
 CSS IWP - 206082814084372

## Summary for Payment Office

SUB-CLIN 000101      ACRN: AA      \$185,000  
 SUB-CLIN 000102      ACRN: AB      \$ 65,662

All other terms and conditions remain the same.

End of Summary of Changes

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 02	3. EFFECTIVE DATE 06-Nov-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVM CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR Clause 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand07184 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) JOHN R DAVIDSON / PROCURING CONTRACTING OFFICER TEL: (805) 989-8541 EMAIL: john.r.davidson@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)		16C. DATE SIGNED 06-Nov-2006	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0002 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	<u>FROM</u>	<u>BY</u>	<u>TO</u>
Estimated Cost	\$231,597	\$277,182	\$508,779
Fixed Fee	19,065	22,818	41,883
CPFF	\$250,662	\$300,000	\$550,662

2. As of the date of execution of this modification, there has been allotted the sum of \$550,662. The balance to fully fund this task order is \$3,699,338. The total funding shall provide for performance of approximately 12% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000103, ACRN AC in the amount of \$300,000  
AC 97X4930 NH2C 252 77777 0 054219 2F 000000 011744560713 \$300,000  
Purchase Request Number – 0010195682  
CIN - 001019568200001  
Document Number – N0002406WX12112  
CSS IWP – 20608 28140 84372

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$185,000
SUB-CLIN 000102	ACRN: AB	\$ 65,662
SUB-CLIN 000103	ACRN: AC	\$300,000

All other terms and conditions remain the same.

End of Summary of Changes

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 03	3. EFFECTIVE DATE 16-Nov-2006	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVM CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand07311 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) JOHN R DAVIDSON / PROCURING CONTRACTING OFFICER TEL: (805) 989-8541 EMAIL: john.r.davidson@navy.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)		16C. DATE SIGNED 16-Nov-2006	

**SECTION SF 30 BLOCK 14 CONTINUATION PAGE****Summary of Changes**

Task Order 0002 under Contract N68936-04-D-0026 is hereby modified in order to provide incremental funding as follows:

1. Under the section **FUNDING**, incremental funding on this task order is increased as follows:

	<b>From</b>	<b>By</b>	<b>To</b>
<b>Estimated Cost</b>	<b>\$508,779</b>	<b>\$309,774</b>	<b>\$818,553</b>
<b>Fixed Fee</b>	<b>41,883</b>	<b>25,500</b>	<b>67,383</b>
<b>CPFF</b>	<b>\$550,662</b>	<b>\$335,274</b>	<b>\$885,936</b>

2. As of the date of execution of this modification, there has been allotted the sum of \$885,936. The balance to fully fund this task order is \$3,364,064. The total funding shall provide for performance of approximately 20% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000104, ACRN AA in the amount of \$93,595  
 AA 97X4930 NH2C 252 77777 0 054219 2F 000000 011744560744 \$93,595 "Increase"  
 Purchase Request Number – 0010198732  
 CIN - 001019873200001  
 Document Number – N0002406WX12122  
 CSS IWP – 20608 28140 84372

SUB-CLIN 000105, ACRN AD in the amount of \$241,679  
 AD 9760400 8ABF 253 SA452 0 068342 2D 054060 0302A0000000 \$241,679  
 Purchase Request Number – 0010198733  
 CIN - 001019873300001  
 Document Number – N0002406WX12466  
 CSS IWP – 20608 28140 84372

**Summary for Payment Office**

SUB-CLIN 000101	ACRN: AA	\$185,000
SUB-CLIN 000102	ACRN: AB	\$ 65,662
SUB-CLIN 000103	ACRN: AC	\$300,000
SUB-CLIN 000104	ACRN: AA	\$ 93,595
SUB-CLIN 000105	ACRN: AD	\$241,679

**All other terms and conditions remain the same.**

End of Summary of Changes

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 04	3. EFFECTIVE DATE 05-Jan-2007	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 230000E ATTN: D. MAHAN (805) 989-1915 575 "I" AVE SUITE 1, BLDG 65 POINT MUGU CA 93042-5049	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Limitation of Funds, FAR 52.232-22 (APR 1984)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mahand07611 See page two.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) JOHN D WATKINS / PROCUREMENT CONTRACTING OFFICE TEL: (760) 939-8158 EMAIL: john.d.watkins@navy.mil		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY 		16C. DATE SIGNED 05-Jan-2007	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## Summary of Changes

Task Order 0002 under Contract N68936-04-D-0026 is modified to provide incremental funding as follows:

1. Under the section FUNDING, incremental funding on this task order is increased as follows:

	From	By	To
Estimated Cost	\$818,553	\$341,857	\$1,160,410
Fixed Fee	67,383	28,143	95,526
CPFF	\$885,936	\$370,000	\$1,255,936

2. As of the date of execution of this modification, there has been allotted the sum of \$1,255,936. The balance to fully fund this task order is \$2,994,064. The total funding shall provide for performance of approximately 29% of the effort.

3. The specific accounting and appropriation data applicable to this modification is as follows:

SUB-CLIN 000106, ACRN AE in the amount of \$370,000  
 AE 97X4930 NH2C 252 77777 0 054219 2F 000000 011938560132 \$370,000  
 Purchase Request Number – 0010203673  
 CIN - 001020367300001  
 Document Number – N0002407WX11574  
 CSS IWP – 20608 28140 84372

## Summary for Payment Office

SUB-CLIN 000101	ACRN: AA	\$185,000
SUB-CLIN 000102	ACRN: AB	\$ 65,662
SUB-CLIN 000103	ACRN: AC	\$300,000
SUB-CLIN 000104	ACRN: AA	\$ 93,595
SUB-CLIN 000105	ACRN: AD	\$241,679
SUB-CLIN 000106	ACRN: AE	\$370,000

All other terms and conditions remain the same.

End of Summary of Changes

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 05	3. EFFECTIVE DATE 27-Mar-2007	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVM CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande071120 See Page 2 for the purpose of this modification.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 27-Mar-2007	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$254,000.00.

SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000107 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000107	FNAPO CPFF FOB: Destination MILSTRIP: N0002407WX11869 PURCHASE REQUEST NUMBER: 0010212305				
				MAX COST	
				FIXED FEE	
				TOTAL MAX COST + FEE	
	ACRN AF				\$254,000.00
	CIN: 001021230500001				

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$254,000.00 from \$1,255,936.00 to \$1,509,936.00.

SUBCLIN 000107:

Funding on SUBCLIN 000107 is initiated as follows:

ACRN: AF

CIN: 001021230500001

Acctng Data: 9770400 8ABF 253 SA452 0 068342 2D 054060

Increase: \$254,000.00

Total: \$254,000.00

Cost Code: 0302A0000000

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 06	3. EFFECTIVE DATE 25-Apr-2007	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCVM CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande071313 See Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 25-Apr-2007

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$250,000.00.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000108 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000108	For Navy Accounting Purposes Only (FNAPO) CPFF FOB: Destination PURCHASE REQUEST NUMBER: 0010195682-0001				
				MAX COST	
				FIXED FEE	
				TOTAL MAX COST + FEE	
	ACRN AC CIN: 001019568200002				\$250,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$250,000.00 from \$1,509,936.00 to \$1,759,936.00.

SUBCLIN 000108:

Funding on SUBCLIN 000108 is initiated as follows:

ACRN: AC

CIN: 001019568200002

Acctng Data: 97X4930 NH2C 252 77777 0 054219 2F 000000

Increase: \$250,000.00

Total: \$250,000.00

Cost Code: 011744560713

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 07	3. EFFECTIVE DATE 30-May-2007	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande071508 See Page 2 for the purpose of this modification.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)		16C. DATE SIGNED 30-May-2007	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$150,000.00.

SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000109 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000109	For Navy Accounting Purposes Only (FNAPO CPFF FOB: Destination MILSTRIP: N0002407WX11574 PURCHASE REQUEST NUMBER: 0010217779				
				MAX COST	
				FIXED FEE	
				TOTAL MAX COST + FEE	
	ACRN AG CIN: 001021777900001				\$150,000.00

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$150,000.00 from \$1,759,936.00 to \$1,909,936.00.

SUBCLIN 000109:

Funding on SUBCLIN 000109 is initiated as follows:

ACRN: AG

CIN: 001021777900001

Acctng Data: 97X4930 NH2C 252 77777 0 054219 2F 000000

Increase: \$150,000.00

Total: \$150,000.00

Cost Code: 011938560165

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 08	3. EFFECTIVE DATE 20-Jul-2007	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCVM CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande071860 See Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 20-Jul-2007
(Signature of person authorized to sign)		(Signature of Contracting Officer)		

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$25,000 and add FAR Clause 52.232-22.

SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000110 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000110	For Navy Accounting Purposes Only CPFF FOB: Destination MILSTRIP: MIPR7HDAVYY816 PURCHASE REQUEST NUMBER: 0010221671				
				MAX COST	
				FIXED FEE	
				TOTAL MAX COST + FEE	
	ACRN AH CIN: 001022167100001				\$25,000.00

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$25,000.00 from \$1,909,936.00 to \$1,934,936.00.

SUBCLIN 000110:

Funding on SUBCLIN 000110 is initiated as follows:

ACRN: AH

CIN: 001022167100001

Acctng Data: 97X4930 NH2C 252 77777 0 054219 2F 000000

Increase: \$25,000.00

Total: \$25,000.00

Cost Code: 012062681250

ADD

52.232-22, LIMITATION OF FUNDS (APR 1984)

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 09	3. EFFECTIVE DATE 28-Jul-2007	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOC INC WM. JERRY GRIFFITH 5720 OBERLIN DR SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande071907 See Page 2 for the purpose of this modification.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)		16C. DATE SIGNED 28-Jul-2007	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to separate the funding between estimated cost and fixed fee for the incremental funding under Modifications 05 through 08 under Task Order 0002 as follows:

## Mods 05-08 Funding

Modification	Issue Date	Funded Amount
05	3/27/07	\$254,000
06	4/25/07	\$250,000
07	5/30/07	\$150,000
08	7/20/07	\$25,000
	TOTAL	\$679,000

## Separation Between Cost and Fee

	From	By	To
Estimated Cost	\$1,160,410.00	\$622,982.50	\$1,783,392.50
Fixed Fee	\$95,526.00	\$56,017.50	\$151,543.50
CPFF	\$1,255,936.00	\$679,000.00	\$1,934,936.00

As of the date of execution of this modification, there has been allotted the sum of \$1,934,936.00. The balance to fully fund this task order is \$2,315,064.00. The total funding shall provide for performance of approximately 46% of the effort.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 10	3. EFFECTIVE DATE 08-Aug-2007	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X	10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande072011 See Page 2 for the purpose of this modification.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)		
(Signature of person authorized to sign)			16C. DATE SIGNED 08-Aug-2007		

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to correct Modification N68936-04-D-0026-000209 as follows due to a mathematical error:

FROM:

Separation Between Cost and Fee			
	From	By	To
Estimated Cost	\$1,160,410.00	\$622,982.50	\$1,783,392.50
Fixed Fee	\$95,526.00	\$56,017.50	\$151,543.50
CPFF	\$1,255,936.00	\$679,000.00	\$1,934,936.00

TO:

Separation Between Cost and Fee			
	From	By	To
Estimated Cost	\$1,160,410.00	\$627,251.73	\$1,787,661.73
Fixed Fee	\$95,526.00	\$51,748.27	\$147,274.27
CPFF	\$1,255,936.00	\$679,000.00	\$1,934,936.00

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   5
2. AMENDMENT/MODIFICATION NO. 11	3. EFFECTIVE DATE 18-Aug-2007	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X 10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande072050 Please see Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>	16C. DATE SIGNED 18-Aug-2007
(Signature of person authorized to sign)			(Signature of Contracting Officer)	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$915,000.00

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000111 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000111	For Navy Accounting Purposes Only CPFF FOB: Destination MILSTRIP: N0002406WX12466 PURCHASE REQUEST NUMBER: 0010224691				
				MAX COST	
				FIXED FEE	
				TOTAL MAX COST + FEE	<hr/>
	ACRN AD CIN: 001022469100001				\$225,000.00

SUBCLIN 000112 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000112	For Navy Accounting Purposes Only CPFF FOB: Destination MILSTRIP: MD7050411P2995 PURCHASE REQUEST NUMBER: 0010225027				
				MAX COST	
				FIXED FEE	
				TOTAL MAX COST + FEE	<hr/>
	ACRN AJ CIN: 001022502700001				\$50,000.00

SUBCLIN 000113 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000113	For Navy Accounting Purposes Only CPFF FOB: Destination MILSTRIP: N0002407WX11574 PURCHASE REQUEST NUMBER: 0010217779-0001				
				MAX COST	
				FIXED FEE	
				TOTAL MAX COST + FEE	
	ACRN AK CIN: 001021777900002				\$320,000.00

SUBCLIN 000114 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000114	For Navy Accounting Purposes Only CPFF FOB: Destination MILSTRIP: N0002406WX50917 PURCHASE REQUEST NUMBER: 0010225029				
				MAX COST	
				FIXED FEE	
				TOTAL MAX COST + FEE	
	ACRN AL CIN: 001022502900001				\$320,000.00

Separation Between Cost and Fee

	From	By	To
Estimated Cost	\$1,787,661.73	\$845,265.59	\$2,632,927.32
Fixed Fee	\$147,274.27	\$69,734.41	\$217,008.68
CPFF	\$1,934,936.00	\$915,000.00	\$2,849,936.00

As of the date of execution of this modification, there has been allotted the sum of \$2,849,936.00. The balance to fully fund this task order is \$1,400,064.00. The total funding shall provide for performance of approximately 67% of the effort.

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$915,000.00 from \$1,934,936.00 to \$2,849,936.00.

SUBCLIN 000111:

Funding on SUBCLIN 000111 is initiated as follows:

ACRN: AD

CIN: 001022469100001

Acctng Data: 9760400 8ABF 253 SA452 0 068342 2D 054060

Increase: \$225,000.00

Total: \$225,000.00

Cost Code: 0302A0000000

SUBCLIN 000112:

Funding on SUBCLIN 000112 is initiated as follows:

ACRN: AJ

CIN: 001022502700001

Acctng Data: 9770400 2520 7BM 25203 0 603175 C0 0255YM

Increase: \$50,000.00

Total: \$50,000.00

Cost Code: D7050411P299

SUBCLIN 000113:

Funding on SUBCLIN 000113 is initiated as follows:

ACRN: AK

CIN: 001021777900002

Acctng Data: 97X4930 NH2C 252 77777 0 054219 2F 000000

Increase: \$320,000.00

Total: \$320,000.00

Cost Code: 011938560191

SUBCLIN 000114:

Funding on SUBCLIN 000114 is initiated as follows:

ACRN: AL

CIN: 001022502900001

Acctng Data: 97X4930 NH2C 252 77777 0 054219 2F 000000

Increase: \$320,000.00

Total: \$320,000.00

Cost Code: 011768851215

FMS Case Number: Ex b(4)

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 12	3. EFFECTIVE DATE 18-Sep-2007	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X 10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande072495 See Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 18-Sep-2007

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to deobligate \$25,000.

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was decreased by \$25,000.00 from \$2,849,936.00 to \$2,824,936.00.

SUBCLIN 000110:

AH: 97X4930 NH2C 252 77777 0 054219 2F 000000 012062681250 (CIN 001022167100001) was decreased by \$25,000.00 from \$25,000.00 to \$0.00

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 13	3. EFFECTIVE DATE 06-Feb-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X 10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds.				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mitchelt08731 See page 2				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 06-Feb-2008

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this Modification is to Incrementally Fund \$100,000.00.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000115 is added as follows:

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000115	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300097251				
				ESTIMATED COST	\$0.00
				FIXED FEE	\$0.00
				<hr/>	\$0.00
				TOTAL EST COST + FEE	\$0.00
	ACRN AM CIN: 130009725100001				\$100,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$100,000.00 from \$2,824,936.00 to \$2,924,936.00.

SUBCLIN 000115:

Funding on SUBCLIN 000115 is initiated as follows:

ACRN: AM

CIN: 130009725100001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$100,000.00

Total: \$100,000.00

Cost Code: WC058PR00175

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE <b>U</b>	PAGE OF PAGES <b>1   3</b>
2. AMENDMENT/MODIFICATION NO. <b>14</b>	3. EFFECTIVE DATE <b>11-Feb-2008</b>	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE <b>N68936</b>	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE <b>S0514A</b>
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X 10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE <b>7N694</b>	FACILITY CODE			
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
<b>13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22 Limitation of Funds.				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: <b>mitchelt081001</b> <b>See Page 2</b>				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>	16C. DATE SIGNED 11-Feb-2008
(Signature of person authorized to sign)			(Signature of Contracting Officer)	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$170,000.00.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000116 is added as follows:

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000116	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300099186				
				ESTIMATED COST	\$0.00
				FIXED FEE	\$0.00
				TOTAL EST COST + FEE	\$0.00
	ACRN AN CIN: 130009918600001				\$170,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$170,000.00 from \$2,924,936.00 to \$3,094,936.00.

SUBCLIN 000116:

Funding on SUBCLIN 000116 is initiated as follows:

ACRN: AN

CIN: 130009918600001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$170,000.00

Total: \$170,000.00

Cost Code: WC058PR00284

(End of Summary of Changes)

N68936-04-D-0026

000214

Page 3 of 3

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 15	3. EFFECTIVE DATE 31-Mar-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X 10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande081530 See Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 31-Mar-2008

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is as follows:

1. Extend the task order period of performance from 3/31/08 to 4/30/08.
2. Correct the following line of accounting:

FROM:

SUBCLIN 000112:

Funding on SUBCLIN 000112 is initiated as follows:

ACRN: AJ

CIN: 001022502700001

Acctng Data: 9770400 2520 7BM 25203 0 603175 C0 0255YM

Increase: \$50,000.00

Total: \$50,000.00

Cost Code: D7050411P299

TO:

SUBCLIN 000112:

Funding on SUBCLIN 000112 is initiated as follows:

ACRN: AJ

CIN: 001022502700001

Acctng Data: 9770400 2520 7 BM 2520 30603175C00 255Y MD7050411P2995 72A007 S12135

Increase: \$50,000.00

Total: \$50,000.00

Cost Code: D7050411P299

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   3
2. AMENDMENT/MODIFICATION NO. 16	3. EFFECTIVE DATE 30-Apr-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X 10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties.				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mitchelt081840 See page 2				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>	16C. DATE SIGNED 30-Apr-2008
(Signature of person authorized to sign)			(Signature of Contracting Officer)	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is as follows:

1. Extend the task order period of performance from 4/30/08 to 6/30/08.
2. Incrementally fund \$335,000.00 and \$80,000.00 for a total of \$415,000.00.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000117 is added as follows:

ITEM NO	SUPPLIES/SERVICES		AMOUNT
000117	For Navy Accounting Purposes Only		
CIN: 130010466100001		ACRN AP	\$335,000.00
PURCHASE REQUEST NUMBER: 1300104661			

SUBCLIN 000118 is added as follows:

ITEM NO	SUPPLIES/SERVICES		AMOUNT
000118	For Navy Accounting Purposes Only		
CIN: 130010466200001		ACRN AQ	\$80,000.00
PURCHASE REQUEST NUMBER: 1300104662			

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$415,000.00 from \$3,094,936.00 to \$3,509,936.00.

SUBCLIN 000117:

Funding on SUBCLIN 000117 is initiated as follows:

ACRN: AP

CIN: 130010466100001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$335,000.00

Total: \$335,000.00

Cost Code: WC058PR00609

SUBCLIN 000118:

Funding on SUBCLIN 000118 is initiated as follows:

ACRN: AQ

CIN: 130010466200001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$80,000.00

Total: \$80,000.00

Cost Code: WC058PR00610

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 17	3. EFFECTIVE DATE 19-Nov-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCVD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
			X 10B. DATED (SEE ITEM 13) 28-Sep-2006	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACT/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: jacobsmk0948 Deobligation				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>	16C. DATE SIGNED 19-Nov-2008
(Signature of person authorized to sign)			(Signature of Contracting Officer)	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to deobligate \$81,858.79.

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was decreased by \$81,858.79 from \$3,509,936.00 to \$3,428,077.21.

SUBCLIN 000117:

AP: 97X4930 NH2C 252 77777 0 050120 2F 000000 WC058PR00609 (CIN 130010466100001) was decreased by \$81,858.79 from \$335,000.00 to \$253,141.21

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 18	3. EFFECTIVE DATE 16-Dec-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCVM CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
CODE 7N694			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0002	
FACILITY CODE			X 10B. DATED (SEE ITEM 13) 28-Sep-2006	
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande09427 See Page 2 herein.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 16-Dec-2008

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to deobligate \$161,141.21.

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was decreased by \$161,141.21 from \$3,428,077.21 to \$3,266,936.00.

SUBCLIN 000117:

AP: 97X4930 NH2C 252 77777 0 050120 2F 000000 WC058PR00609 (CIN 130010466100001) was decreased by \$161,141.21 from \$253,141.21 to \$92,000.00

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 01	3. EFFECTIVE DATE 01-Aug-2007	4. REQUISITION/PURCHASE REQ. NO. 0010203209-0002		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0003	
			X	10B. DATED (SEE ITEM 13) 27-Apr-2007	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande071513 See Page 2 for the purpose of this modification.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 01-Aug-2007	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is

1. to decrease the total cost because of an error in the PRA proposal, and
2. to direct the contractor to use the DD254 attached to the Basic Contract for security purposes as stated in the task order SOW.

SECTION A - SOLICITATION/CONTRACT FORM

The total cost of this contract was decreased by \$14,596.00 from \$863,825.00 to \$849,229.00.

SECTION B - SUPPLIES OR SERVICES AND PRICES

CLIN 0001

The estimated/max cost has decreased by \$13,483.00 from \$798,078.00 to \$784,595.00.

The fixed fee has decreased by \$1,113.00 from \$65,747.00 to \$64,634.00.

The total cost of this line item has decreased by \$14,596.00 from \$863,825.00 to \$849,229.00.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 02	3. EFFECTIVE DATE 18-Dec-2007	4. REQUISITION/PURCHASE REQ. NO. 1300053780-0002		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0003	
			X	10B. DATED (SEE ITEM 13) 27-Apr-2007	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande08389 See Page 2 for the purpose of this modification.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 18-Dec-2007	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to extend the period of performance from 31 December 2007 to 29 February 2008 at no additional cost to the Government.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 03	3. EFFECTIVE DATE 24-Jan-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0003	
			X	10B. DATED (SEE ITEM 13) 27-Apr-2007	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: mitchelt08665 See page 2.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: maryjacobs@navy.mil		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 24-Jan-2008	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this Modification is to Incrementally Fund \$49,229.00.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000102 is added as follows:

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000102	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300097212				
				ESTIMATED COST	\$0.00
				FIXED FEE	\$0.00
				TOTAL EST COST + FEE	\$0.00
	ACRN AB CIN: 130009721200001				\$49,229.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$49,229.00 from \$800,000.00 to \$849,229.00.

SUBCLIN 000102:

Funding on SUBCLIN 000102 is initiated as follows:

ACRN: AB

CIN: 130009721200001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$49,229.00

Total: \$49,229.00

Cost Code: WC058PR00173

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 04	3. EFFECTIVE DATE 29-Feb-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0003	
			X	10B. DATED (SEE ITEM 13) 27-Apr-2007	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of the Parties					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande081261 See Page 2 for the purpose of this modification.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 29-Feb-2008	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to extend the period of performance from 29 February to 30 June 2008.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 05	3. EFFECTIVE DATE 30-Jun-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0003	
			X	10B. DATED (SEE ITEM 13) 27-Apr-2007	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande082274 See Page 2 for the purpose of this modification.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 30-Jun-2008	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to extend the period of performance from 6/3/08 to 9/30/08 at no additional cost to the Government.

(End of Summary of Changes)

# ORDER FOR SUPPLIES OR SERVICES

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. <b>N68936-04-D-0026</b>				2. DELIVERY ORDER/ CALL NO. <b>0003</b>		3. DATE OF ORDER/ CALL (YYYYMMDD) <b>2007 Apr 27</b>		4. REQ./ PURCH. REQUEST NO. <b>0010203209-0002</b>		5. PRIORITY <b>DO-C9</b>					
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108				CODE <b>N68936</b>		7. ADMINISTERED BY (if other than 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 93211-2241				CODE <b>S0514A</b>					
9. CONTRACTOR NAME <b>PHOTON RESEARCH ASSOC INC</b> AND <b>WM. JERRY GRIFFITH</b> ADDRESS <b>5720 OBERLIN DR</b> <b>SAN DIEGO CA 92121-1723</b>						CODE <b>7N694</b>		FACILITY		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) <b>SEE SCHEDULE</b>					
						12. DISCOUNT TERMS		11. MARK IF BUSINESS IS <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED		13. MAIL INVOICES TO THE ADDRESS IN BLOCK <b>See Item 15</b>					
14. SHIP TO <b>SEE SCHEDULE</b>				CODE		15. PAYMENT WILL BE MADE BY DFAS - COLUMBUS CENTER WEST ENTITLEMENT OPERATIONS PO BOX 182381 COLUMBUS OH 43218-2381				CODE <b>HQ0339</b>					
<b>MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.</b>															
16. TYPE OF ORDER	DELIVERY/ CALL	<input checked="" type="checkbox"/>	This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.												
	PURCHASE	<input type="checkbox"/>	Reference your quote dated Furnish the following on terms specified herein. REF:												
ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.															
NAME OF CONTRACTOR				SIGNATURE				TYPED NAME AND TITLE				DATE SIGNED (YYYYMMDD)			
<input checked="" type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:															
17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE <b>See Schedule</b>															
18. ITEM NO.		19. SCHEDULE OF SUPPLIES/ SERVICES				20. QUANTITY ORDERED/ ACCEPTED*		21. UNIT	22. UNIT PRICE		23. AMOUNT				
<b>SEE SCHEDULE</b>															
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.				24. UNITED STATES OF AMERICA TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil BY: MARY K. JACOBS				<i>Mary Jacobs</i> CONTRACTING / ORDERING OFFICER		25. TOTAL <b>\$863,825.00</b>		26. DIFFERENCES			
27a. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED															
b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE						c. DATE (YYYYMMDD)		d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE							
e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE						28. SHIP NO.		29. DO VOUCHER NO.		30. INITIALS					
f. TELEPHONE NUMBER			g. E-MAIL ADDRESS			<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		32. PAID BY		33. AMOUNT VERIFIED CORRECT FOR					
36. I certify this account is correct and proper for payment.															
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER													
						<input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		31. PAYMENT		34. CHECK NUMBER					
										35. BILL OF LADING NO.					
37. RECEIVED AT		38. RECEIVED BY		39. DATE RECEIVED (YYYYMMDD)		40. TOTAL CONTAINERS		41. S/R ACCOUNT NO.		42. S/R VOUCHER NO.					

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Cast Glance Mid-Wave Infrared Optical Up CPFF				
	The Contractor shall provide engineering services for the CG MWIR Optical Upgrades in accordance with the Statement of Work and PRA Proposal No 81000-409.				
	FOB: Destination				
				ESTIMATED COST	\$798,078.00
				FIXED FEE	\$65,747.00
				TOTAL EST COST + FEE	<u>\$863,825.00</u>

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000101	For Accounting Purposes Only CPFF				
	FOB: Destination				
	MILSTRIP: N0002407WX11574				
	PURCHASE REQUEST NUMBER: 0010203209-0002				
				MAX COST	
				FIXED FEE	
				TOTAL MAX COST + FEE	<u>\$800,000.00</u>
	ACRN AA				
	CIN: 001020320900003				

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0002	Technical Data CPFF				NSP
	The Contractor shall provide Technical Data in accordance with the basic contract CDRLs, Exhibit (A).				
	FOB: Destination				
	MILSTRIP: N0002407WX11574				
	PURCHASE REQUEST NUMBER: 0010203209-0002				

## Section C - Descriptions and Specifications

**Statement of Work**  
**CAST GLANCE (CG) MID-WAVE INFRARED (MWIR)**  
**OPTICAL UPGRADES**

**1.0 INTRODUCTION**

**1.1 BACKGROUND.** The mission of the Naval Air Warfare Center Weapons Division (NAVAIR WD), Point Mugu, CA, is to be the Navy's full-spectrum Research, Development, Test and Evaluation (RDT&E), and In-service Engineering Center for weapons systems associated with naval warfare, missiles and missile subsystems and supporting systems, weapons integration, and assigned electronic warfare systems. This responsibility includes performing Developmental and Operational Testing and Evaluation (DOT&E), full operational support and planning for each operation, coordination of post-exercise analysis, and support for Naval Surface Weapons Anti-Air Warfare (AAW) T&E operations and fleet exercises throughout the United States.

**1.2 SCOPE.** This SOW covers engineering services to be provided to the NAVAIR WD, Point Mugu, CA. Services to be provided are in support of T&E and systems engineering activities related to Aegis Ballistic Missile Defense (BMD) and Theater High-Altitude Area Defense (THAAD) Programs at Pacific Missile Range Facility (PMRF). Tasking includes Operations Research Support, Physics Analysis, Test Plans and Procedures, Test Data Collection Analysis and Test Data Review, Test Monitoring and Real-Time Mission Support, Program Management Support, Management Reports, and Briefing Preparations. Support shall be provided at various national test ranges as required including the PMRF, Barking Sands, Kauai, HI.

**1.3** The contractor will be required to make recommendations and implement modifications to the CG optical sensor platform to improve collection of Aegis BMD intercept test data.

**2.0 APPLICABLE DOCUMENTS**

The following list of documents will be made available, if required by the contractor, to perform the tasks defined in this contract, and is not intended to be all-inclusive but is given as a point of reference.

**2.1** TEMP 1459-1 Test & Evaluation Master Plan Number 1459-1 for the Navy Theater Wide (NTW) TBMD, dated Sep 1998

**2.2** OPNAVINST 3960-10 Test and Evaluation

**2.3** Aegis Ballistic Missile Defense Flight Mission (FM) Test Plan

**3.0 REQUIREMENTS**

The Government will provide the contractor format requirements, Government-furnished information (GFI) engineering source data, and tasking due dates via email. Contractor format is authorized, except in cases where the Government will define the format via email.

### **3.1 TASK AREA C –Test Plans and Procedures**

#### **Subtask-1. Cameras**

The contractor shall define requirements for addition of a sensitive MWIR acquisition camera and digital data acquisition system to the CG suite of visible and near infrared (NIR) sensors. Based on those requirements, the contractor shall make recommendations and procure a MWIR camera (nominal waveband 3 – 5 microns) and data acquisition (DA) system for use with an existing 7-inch stabilized telescope aboard the CG aircraft. The contractor shall perform acceptance testing on the camera and DA system, although some of this testing may be done in conjunction with the L-3 Halo-1/NAVAIR Program. (Contract Attachment 1, SOW, paragraphs 3.2.2 and 3.3.3)

#### **Subtask-2. Telescope**

The contractor shall assist NAVAIR-China Lake in assessing the optical characteristics of the current telescope, defining required changes to enable MWIR operation, and implementing necessary optical and mechanical modifications to the existing CG 7-inch telescope. Modifications will include telescope optics design, procurement specification, and design and procurement for beam splitter and matching optics. (Contract Attachment 1, SOW, paragraphs 3.2.2 and 3.3.3)

#### **Subtask-3. Halo-1 Integration and Test**

The contractor shall deliver camera and DA system to L-3 at the Halo-1 hanger at Tulsa, OK, on April 1, 2007. The contractor shall assist L-3 in installation and test aboard Halo-1. The contractor shall provide Halo-1 crew with instructions on operation of the camera and DA system, for use in the FTM-11B test on April 25, 2007, and the FTM-12 test on June 14, 2007. The contractor shall assist in the development of a test plan for MWIR sensor acceptance and calibration testing. The contractor shall summarize lessons learned for camera operation. (Contract Attachment 1, SOW, paragraph 5.8.2)

#### **Subtask-4. Cast Glance Integration and Test**

The contractor shall mount the modified telescope, camera, beam splitter, and matching optics aboard the CG aircraft, and perform necessary optical alignment and sensitivity tests, by September 1, 2007, in preparation for use at FTM-13 in November 2007. Testing will also address alignment of existing four visible and NIR sensors using common telescope. System level testing at Point Mugu will be conducted with the new infrared window in place. (If new window is not available, current fused silica (FS) window will be removed and ground testing will be conducted against distant targets without a window. Alignment tests will be repeated when new MWIR window is installed.) The contractor shall provide CG crew with operation instructions for camera and DA system. (Contract Attachment 1, SOW, paragraphs 3.3.7 and 3.5.2)

#### **Subtask-5. Post-mission Data Analysis**

The contractor shall reduce FTM-11B and FTM-12 MWIR data collected from Halo-1 and CG aircraft to assess system sensitivity and performance, and recommend any necessary modifications prior to installation on CG. This data analysis activity will be conducted in conjunction with the L-3 Halo-1/NAVAIR Program supported by NAVAIR. (Contract Attachment 1, SOW, paragraphs 3.2.2 and 3.3.3)

## Subtask-6. MWIR/VIS Optical Window for Cast Glance

The contractor shall procure a flight-certified ZnS (Cleartran) MWIR/visible optical window for the CG P-3 aircraft, with approximate dimensions of 19 x 23 inches. Window will include optical AR coating optimized for simultaneous MWIR and visible transmission, with certified scratch/dig specs. Flight-certification documentation will be included. The contractor shall install it on the CG aircraft September 1, 2007. The contractor shall be assisted in this task by the L-3 Halo-1/Aegis BMD Program. (Contract Attachment 1, SOW, paragraph 5.8.2)

### 4.0 DATA DELIVERABLES

4.1 Specific items of sensor data requirements, reports, test reports, test procedures, technical support documentation, calibration procedures, acceptance test plan, data analysis procedures, concept of operations (CONOPS), and progress reports will be provided in accordance with the applicable Contract Data Requirements List (CDRL).

- 4.1.1 Technical Report, Technical Plans and Procedures, in accordance with paragraph 3.1 (CDRL A003)
- 4.1.2 Technical Report, Calibration Procedures, in accordance with paragraph 3.1 (CDRL A003)
- 4.1.3 Technical Report, Acceptance Test Plan, in accordance with paragraph 3.1 (CDRL A003)
- 4.1.4 Technical Report, Data Analysis Procedures, in accordance with paragraph 3.1 (CDRL A003)
- 4.1.5 Technical Report, CONOPS, in accordance with paragraph 3.1 (CDRL A003)
- 4.1.6 Technical Report, Periodic Progress Reports, in accordance with paragraph 3.1 (CDRL A004)

### 5.0 SPECIAL CONSIDERATIONS

#### 5.1 SECURITY

The Contractor shall perform work up to the level of SECRET in the performance of this contract in accordance with the applicable Contract DD 254, Attachment 2.

#### 5.2 TRAVEL

All requests for travel will be submitted in writing to the Technical Assistant (TA) via the Contracting Officer's Representative (COR) for approval at least two (2) weeks prior to occurrence. Each travel request will include budgeted travel amount, projected cost for requested trip and balance remaining. Each travel request will itemize duration, airfare, and cost of lodging, per diem, car rentals, miscellaneous, and names of traveler(s). Travel in support of this task order is anticipated to be as follows:

TRIPS	PEOPLE	DAYS	FROM	TO
5	2	3	San Diego, CA	NBVC and NAWC, Point Mugu, CA
5	2	4	San Diego, CA	Kauai, HI
1	2	5	San Diego, CA	Albuquerque, NM
2	2	4	San Diego, CA	Oklahoma City, OK

## 6.0 QUALITY ASSURANCE SURVEILLANCE PLAN (QASP)

Performance Objective	Performance Standard (Expectations)	Acceptable Quality Level	Inspection Type and Frequency	Incentive or Remedy
<p><b>Schedule.</b> The contractor shall conduct statement of work (SOW) tasking in alignment with published schedules and their milestone events.</p>	<p>Appropriate SOW tasking is performed without causing programmatic delay to the government. All produces are submitted timely.</p>	<p><b>Satisfactory:</b> Performance and deliverables meet the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Performance and deliverables result in moderate delay or impact to the program. <b>Unsatisfactory:</b> Performance and deliverables result in unacceptable delay or impact to the program.</p>	<p>Each category will be evaluated every six (6) months and will be based upon government teammates' evaluations conducted throughout the performance period. The overall performance rating will be assigned by the Task Order Manager (TOM) and subject to COR approval.</p>	<p><b>Satisfactory:</b> 100% fee <b>Marginal:</b> 50% fee <b>Unsatisfactory:</b> 0% fee</p>
<p><b>Quality:</b> The contractor shall provide engineering and technical support in accordance with SOW tasking.</p>	<p>Analysis methodology and deliverables are consistent, reflective of sound industry practices, and data deliverables are clear, concise, thorough and complete in accordance with (IAW) referenced CDRLs.</p>			
<p><b>Management.</b> The contractor shall participate as an integrated member of the team and contribute to the successful completion of mission requirement.</p>	<p>Management and teaming allow seamless integration among government and contractor teammates. The contractor takes a proactive role in resolving issues. Issues identified by the government are addressed and resolved in a timely fashion.</p>	<p><b>Satisfactory:</b> Performance meets the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Performance leaves many questionable situations for government resolution. <b>Unsatisfactory:</b> Teaming is discordant and the contractor is not proactive.</p>		
<p><b>Cost:</b> Contractor incurred costs and hours are consistent with the value of the services and products received by the government.</p>	<p>Costs incurred and hours expended is commensurate with the services performed and products delivered, translating into value to the government. All funding and cost status reports are accurate and complete and submitted in accordance with contract requirements.</p>	<p><b>Satisfactory:</b> Contractor meets the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Contractor's expenditure of costs and hours are sometimes not appropriate for the performance and deliverables provided. <b>Unsatisfactory:</b> Contractor's expenditure of costs and hours are not appropriate for the performance and deliverables provided.</p>		

## Section E - Inspection and Acceptance

## INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government
0002	Destination	Government	Destination	Government

## Section F - Deliveries or Performance

## DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	POP 23-APR-2007 TO 31-DEC-2007	N/A	N/A FOB: Destination	
0002	POP 23-APR-2007 TO 31-DEC-2007	N/A	N/A FOB: Destination	

## Section G - Contract Administration Data

## ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930 NH2C 252 77777 0 054219 2F 000000  
 COST CODE: 011938560140  
 AMOUNT: \$800,000.00  
 CIN 001020320900003: \$800,000.00

## Section H - Special Contract Requirements

### Payment of Fixed Fee

Subject to the withholding provisions of the clause at FAR 52.216-8 entitled "Fixed Fee", the fixed fee specified shall be paid at the rate of 8.250% of all costs expended during each vouchering period, provided, however, that the total fee payable shall not exceed the fee established in the task order.

### Level of Effort

The estimated level of effort for this order is 952 direct labor hours. The composition of hours is as follows:

Labor Category	Hours
Sr Tech Spec	Ex b(4)
Subject Matter Expert	Ex b(4)
Tech Specialist	Ex b(4)
Total	952

### Quality Assurance Surveillance Plan (QASP)

Deliverables shall be reviewed by the Technical Assistant and provide an assessment to the Contract Specialist upon completion of the order in accordance with the QASP. The contractor's performance of the requirements is subject to the inspection and acceptance clauses found in Section E of the Contract. Payment of the fixed fee will be in accordance with the QASP.

### Contracting Officer's Representative (COR)

The COR is responsible for monitoring the performance and progress as well as overall technical management of this order and should be contacted regarding questions or problems of a technical nature. In no event, however, shall any understanding or agreement, modification, change order, or other matter deviating from the terms of the order between the Contractor and any person other than the Contracting/Ordering Officer be effective or binding upon the Government unless formalized by the proper contractual documents executed by the Contracting/Ordering Officer prior to completion of this task order.

When, in the opinion of the Contractor, the COR requests effort outside the scope of the order, the Contractor shall promptly notify the Contracting/Ordering Officer in writing. No action will be taken by the Contractor under such technical instruction unless the Contracting/Ordering Officer has issued an order change. On all problems that pertain to the contract or order terms, the Contractor shall contact the Contracting/Ordering Officer.

The designated COR is

Name: Ex b(6)  
Address: Commander  
Code 521000E  
NAVAIRWARCENWPNDIV  
Point Mugu, CA 93042  
E-mail: Ex b(6)  
Phone: 805- Ex b(6)

The designated Technical Assistant (TA) is

Name: Ex b(6)  
Address: Commander  
Code 4KEL00E  
NAVAIRWARCENWPNDIV  
Point Mugu, CA 93042  
E-mail: Ex b(6)  
Phone: 805- Ex b(6)  
Cell: 805 Ex b(6)

Travel

All requests for travel shall be submitted in writing to the COR for approval at least two weeks prior to planned commencement of travel. Costs associated with any travel not approved in advance by the COR will be disallowed.

Material

Purchase of material with a unit cost of \$5,000 or less does not require prior Government approval.

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.232-22

Limitation Of Funds

APR 1984

# ORDER FOR SUPPLIES OR SERVICES

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. <b>N68936-04-D-0026</b>				2. DELIVERY ORDER/ CALL NO. <b>0004</b>		3. DATE OF ORDER/ CALL (YYYYMMDD) <b>2008 Jun 23</b>		4. REQ./ PURCH. REQUEST NO. <b>1300100152</b>		5. PRIORITY <b>DO-C9</b>					
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108				CODE <b>N68936</b>		7. ADMINISTERED BY (if other than 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241				CODE <b>S0514A</b>					
9. CONTRACTOR PHOTON RESEARCH ASSOCIATES, INC. NAME WM. JERRY GRIFFITH AND 9985 PACIFIC HEIGHTS BLVD STE 200 ADDRESS SAN DIEGO CA 92121-1723				CODE <b>7N694</b>		FACILITY		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) <b>SEE SCHEDULE</b>		11. MARK IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED					
14. SHIP TO <b>SEE SCHEDULE</b>				CODE		15. PAYMENT WILL BE MADE BY DFAS - COLUMBUS CENTER WEST ENTITLEMENT OPERATIONS PO BOX 182381 COLUMBUS OH 43218-2381		CODE <b>HQ0339</b>		13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Item 15					
16. TYPE OF ORDER		DELIVERY/ CALL	<input checked="" type="checkbox"/>	This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.											
		PURCHASE	<input type="checkbox"/>	Reference your quote dated Furnish the following on terms specified herein. REF:											
ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.															
NAME OF CONTRACTOR				SIGNATURE				TYPED NAME AND TITLE				DATE SIGNED (YYYYMMDD)			
<input checked="" type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:															
17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE <b>See Schedule</b>															
18. ITEM NO.		19. SCHEDULE OF SUPPLIES/ SERVICES				20. QUANTITY ORDERED/ ACCEPTED*		21. UNIT		22. UNIT PRICE		23. AMOUNT			
		<b>SEE SCHEDULE</b>													
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.				24. UNITED STATES OF AMERICA TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil BY: MARY K. JACOBS				<i>Mary Jacobs</i> CONTRACTING / ORDERING OFFICER		25. TOTAL		\$5,182,272.00			
27a. QUANTITY IN COLUMN 20 HAS BEEN				<input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED											
b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE						c. DATE (YYYYMMDD)		d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE							
e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE						28. SHIP NO.		29. DO VOUCHER NO.		30. INITIALS					
f. TELEPHONE NUMBER			g. E-MAIL ADDRESS			<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		32. PAID BY		33. AMOUNT VERIFIED CORRECT FOR					
36. I certify this account is correct and proper for payment.						31. PAYMENT				34. CHECK NUMBER					
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER				<input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				35. BILL OF LADING NO.					
37. RECEIVED AT		38. RECEIVED BY		39. DATE RECEIVED (YYYYMMDD)		40. TOTAL CONTAINERS		41. S/R ACCOUNT NO.		42. S/R VOUCHER NO.					

## Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0001	Engineering Services CPFF Engineering services in support of test and evaluation and systems engineering activities related to AEGIS BMD and THAAD Programs to include operations research support, physics analysis, test plans and procedures, test data collection analysis and test data review, test monitoring and real-time mission support, program management support, management reports, and briefing preparations. Support to be provided primarily at Pacific Missile Range Facility, Barking Sands, Kauai, Hawaii. FOB: Destination	23,896	Hours		
				MAX COST	\$4,788,031.00
				FIXED FEE	\$394,241.00
				TOTAL MAX COST + FEE	<u>\$5,182,272.00</u>

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000101	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300100152  ACRN AA CIN: 130010015200001				\$200,000.00

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0002	Technical Data CPFF The Contractor shall provide Technical Data in accordance with the Contract Data Requirements List (CDRLs) in the Basic Contract. FOB: Destination	1	Lot		NSP

## Section C - Descriptions and Specifications

SOW WITH QASP**STATEMENT OF WORK****Ballistic Missile Defense (BMD) Engineering Services****1.0 INTRODUCTION**

- 1.1 **BACKGROUND.** The mission of the Naval Air Warfare Center Weapons Division (NAVAIR WD), Point Mugu, CA, is to be the Navy's full-spectrum Research, Development, Test and Evaluation (RDT&E), and In-service Engineering Center for weapons systems associated with Naval warfare, missiles and missile subsystems and supporting systems, weapons integration, and assigned electronic warfare systems. This responsibility includes performing Developmental and Operational Testing and Evaluation (DOT&E); full operational support and planning for each operation; coordination of post-exercise analysis; and support for Naval Surface Weapons Anti-Air Warfare (AAW) T&E operations and fleet exercises throughout the United States.
- 1.2 **MISSION.** The mission of the Missile Defense Agency (MDA) under the Office of the Secretary of Defense (OSD) is to develop and field an integrated ballistic Missile Defense System (BMDS) capable of providing a layered defense for the United States and its deployed forces, friends and allies against ballistic missiles of all ranges in all phases of flight. MDA is responsible for research, development, testing and evaluation. Using complementary interceptors, sensors, and Battle Management Command and Control Systems, the planned missile defense system will be able to engage all classes and ranges of ballistic missile threats. Missile defense elements being developed and tested by MDA are primarily based on a hit-to-kill technology.
- 1.2.1 One of the weapon systems elements presently under development as part of the MDA strategy is to deploy sea-based interceptors to defend against ballistic missile target threats. The Navy's Aegis Ballistic Missile Defense (BMD), program will provide protection against medium/long-range ballistic missile threats for vital political and military assets based on available Sea Room and Ship Operating Areas. The Aegis BMD system requirements are to conduct engagements with STANDARD Missile 3 (SM-3) intercept missiles of exo-atmospheric ballistic missile threats in the ascending phase after launch, near apogee during mid-course along the trajectory, and during the descent phase near impact. The Navy Theater Wide (NTW) Program builds on the Navy's Aegis Leap Intercept (ALI) and NTW testing of the Aegis Weapon System (AWS) and the SM-3. The NTW design assumes completion of Navy modifications to the AWS including weapons control, SPY-1 Radar, Command and Control Systems, and the SM-3. These modifications when completed will be known as the Aegis BMD 4.0 configuration. Completion date is currently FY 2014.
- 1.2.2 Another weapon system element that is a part of the MDA concept is the Theater High-Altitude Area Defense (THAAD) program. THAAD is an endo-/exo-atmospheric system that will destroy a ballistic missile as it transitions from the mid-course to terminal phase of its trajectory. The THAAD system is comprised of an interceptor and the TMD Ground Based Radar (GBR) surveillance and tracking sensor.
- 1.2.3 Contractor support includes a series of planned demonstrations leading up to Developmental Test/Operational Test (DT/OT) for an integrated BMD system.
- 1.3 **SCOPE.** This statement of work (SOW) covers engineering services to be provided to the NAVAIR WD, Point Mugu, CA. Services to be provided are in support of Test and Evaluation (T&E) and systems engineering activities related to Aegis BMD, THAAD, and other MDA-related Programs at PMRF. Tasking includes Operations Research Support, Physics Analysis, Test Plans and Procedures, Test Data Collection

Analysis and Test Data Review, Test Monitoring and Real-Time Mission Support, Program Management Support, Management Reports and Briefing Preparations. Support shall be provided at various national test ranges as required including the Pacific Missile Range Facility (PMRF), Barking Sands, Kauai, HI.

- 1.4 **PERFORMANCE BASED.** This statement of work is performance based and all associated work shall be performed in accordance with the Quality Assurance Surveillance Plan.
- 1.5 **PERIOD OF PERFORMANCE.** The period of performance of this task order shall be from 1 April 2008 through 06 September 2009 to cover FTM-14 events 1 and 2 currently scheduled for June 2008, THAAD FTT-09 currently scheduled for late June 2008, JFTM-2 Events 1 and 2, currently scheduled for November 2008, THAAD FTT-10 currently scheduled for Dec 2008, FTM-15 events 1 and 2 currently scheduled for March 2009, THAAD FTT-11 currently scheduled for April 2009, FTM-16 events 1 and 2 currently scheduled for May/June 2009, JFTM-3 Events 1 and 2, currently scheduled for Fall 2009, other Aegis, THAAD, or MDA-related missions as requested, pre-mission planning support at PMRF and all post-mission analysis. Exercise dates are subject to change by the Aegis BMD Program Office.

## **2.0 APPLICABLE DOCUMENTS**

The following list of documents will be made available, if required by the contractor, to perform the tasks defined in this contract, and is not intended to be all-inclusive, but is given as a point of reference. Additional applicable documents will be provided as required.

- 2.1 System Specification Navy Area, Theater Ballistic Missile Defense (TBMD) Systems Requirements Document (U), dated 13 March 1999
- 2.2 TEMP 1459-1 Test & Evaluation Master Plan Number 1459-1 for the Navy Theater Wide (NTW) TBMD, dated Sep 1998
- 2.3 DOD 5000.e Test and Evaluation
- 2.4 OPNAVINST 3960-10 Test and Evaluation
- 2.5 Aegis Ballistic Missile Defense Flight Mission (FM) Test Plan

- 3.0 REQUIREMENTS.** The Government will provide the Contractor format requirements, GFI engineering source data, and tasking due dates via email notification. Contractor format is authorized except in cases where the Government will define the format via email notification.

### **3.1 Task Area A--Operations Research Support.**

- 3.1.1 The Contractor shall perform technical analyses related to the performance of land based, sea-based, airborne, and space-based electro-optical sensor systems including National Means Sensors (NMS). This effort will include assessing target detectability (with respect to expected thresholds for the sensor), identification and discrimination ensuring that the experiment is planned so as to be consistent with sensor systems constraints (e.g. background issues, sensor locations, etc.). Analyses will include sensor data fusion and correlation. This effort will build on the analysis products developed during extended tracking and control exercise (ET&CE) and the Aegis BMD FM-2, FM-3, FM-4, FM-5, FM-6, FM-7, FTM-8, FTM-10, FTM-11, FTM-12, FTM-13 and JFTM-1 missions. Basic contract SOW paragraph 3.1.1 applies.
- 3.1.2 The Contractor shall develop, evaluate, and/or execute threat models to predict the visible and Infrared (IR) signatures of Navy BMD threats. The models shall include sensitivities of model predictions to parameters, and infrared characterization and modeling of various taxonomies. The Contractor shall assess and validate

the model results using Government furnished measurement data to determine if the models accurately predict IR BMD threat signatures for target identification and potential applications to target discrimination. Basic contract SOW paragraph 3.1.2 applies.

- 3.1.3 The Contractor shall assess, apply, and adapt Government furnished discrimination algorithms to BMD threat systems to assist in the development of IR seeker Target Object Map (TOM) functions. This will include algorithms that exploit mean intensity, multicolor temperature-based features, and temporal-based features. Complementary information from multiple sources to assess target/interceptor events shall include metric accuracy data (the difference between measured and truth trajectory) and signature fusion. A discrimination solution for a particular system shall be tailored to the system threat, sensor design, and available processing power. The total solution for an interceptor can incorporate narrow band or wide band radar information, metric information, and optical radiometric data. Basic contract SOW paragraph 3.1.3 applies.
- 3.1.4 The Contractor shall adapt the Battlespace Environmental Signatures Toolkit (BEST), and its supporting databases to the BMD requirements. The model shall produce IR scenes for use in seeker evaluations and real-time hardware-in-the-loop simulations. Basic contract SOW paragraph 3.1.4 applies.
- 3.1.5 The Contractor shall analyze the IR seeker to determine the system performance during engagements. Analysis shall include detection, tracking, discrimination, and aim point selection. The Contractor shall provide recommendations for any improvements based on the analysis. Basic contract SOW paragraph 3.1.5 applies.
- 3.1.6 The Contractor shall define optimum electro-optical sensor data distribution architecture methods for near-real-time application based on web technology and provide recommendations. The Contractor shall analyze and evaluate data management, dissemination, and processing architectures for the various separate and collective optical sensors. The objective is to develop and demonstrate that the infrastructure is in place that will enable the sensor systems to meet overall test mission objectives and requirements. This will include addressing the post-mission data collection, conditioning, dissemination (including bandwidth, timelines, latency, etc.), display, processing, exploitation, storage archiving, and information delivery to the government selected sites and/or other appropriate organizations. The objective of this task is to ensure the overall capability of the integrated range operations to meet the data product requirements and informational needs of the Navy, as well as other service programs using the PMRF range/test facilities. Basic contract SOW paragraph 3.1.6 applies.
- 3.1.7 The Contractor shall provide data analysis of the target intercepts based on the electro-optical and radar sensor data collected during the Aegis FTM, THAAD, MDA-related, and customer requested mission testing. Data analysis will include sensor fusion and correlation from multiple sources. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment. Basic contract SOW paragraph 3.1.7 applies.
- 3.1.8 The Contractor shall provide technical support to NAVAIR WD Point Mugu, Aegis BMD program office, and PMRF for the stabilized high-accuracy optical tracking system (SHOTS) optics testing/optical instrumentation for test mission support. Basic contract SOW paragraph 3.1.8 applies.
- 3.1.9 The Contractor shall provide technical simulations, mission conduct, mission planning, post mission test data analyses, and technical oversight to the Multi-Frame Blind De-Convolution (MFBD) program at PMRF. The Contractor shall also develop Figures of Merit (FOM) to quantitatively assess image quality improvement. Basic contract SOW paragraph 3.1.6 applies.
- 3.1.10 The contractor shall provide technical support to Aegis BMD, PMRF, THAAD, and MDA-related programsto design new sensor packages, including integration, for land, sea, and air-based platforms. This

includes performing studies resulting in the design or recommendations of new systems for collection assets. Basic contract SOW paragraph 3.1.8 applies.

- 3.1.11 The Contractor shall perform analysis of data collected of Resident Space Objects (RSOs) by Auxiliary Sensors during pre-mission rehearsals in support of Aegis BMD or MDA-related programs. Basic contract SOW paragraph 3.1.7 applies.
- 3.1.12 The contractor shall assist the government with experimental payloads or sensors on targets and/or interceptors. Aegis BMD, THAAD, MDA-related, or other customer requested tests provide research opportunities to perform experiments on a non-interference basis. An example might be attaching gas canisters to the target or new sensors on the target or interceptor. Data from these experiments may provide additional insight into missile flyout and intercept phenomenology at little cost to the program. The contractor shall assist with the development, planning, execution, and data analysis of such experiments. Basic contract SOW paragraph 3.1.1 applies.
- 3.1.13 The contractor shall perform analysis of near-infrared plume data to support early launch detection studies for MDA-related programs. Data sources may include airborne assets such as Cast Glance and other auxiliary sensors. Basic contract SOW paragraph 3.1.7 applies.
- 3.1.14 The contractor shall provide technical lead support for PMRF optical working group. Basic contract SOW paragraph 3.1.8 applies.
- 3.1.15 The contractor shall provide optical systems engineering support including mission planning, mission conduct, government acceptance test planning, optical instrumentation specification, and technical requirements documentation development (TRD). Provide optical simulator support for mission rehearsal and conduct. Basic contract SOW paragraph 3.1.15 applies.
- 3.1.16 The contractor shall research optical surveillance systems capabilities including ground/sea, airborne and space-based sensor systems. Basic contract SOW paragraph 3.1.1 applies.

## **3.2 Task Area B--Physics Analyses.**

- 3.2.1 The Contractor shall analyze Government-furnished electro-optical data to assess the utility of data for supporting Aegis BMD system evaluations, evaluate the requirements for various types of electro-optical data, define a range of options for meeting the requirements, and provide recommendations, prioritized, of the options. The analyses shall include ground, mobile (ship-based, air-based), and space-based sensors and should consider both existing as well as potential systems. Advanced optical methods for sensing targets will be defined for future applications. Processing methods of hyper- spectral data and high frame rate data will be examined. Basic contract SOW paragraph 3.2.1 applies.
- 3.2.2 The Contractor shall review BMD test scenarios and ensure test requirements for optical systems provide for comprehensive optical data collections. The Contractor shall provide recommendations on how to best achieve comprehensive optical data collection. Waveband selection criteria will be developed by conducting a computational search using the end to end radiometric model to define the band location and bandwidth which maximizes observed signal to noise ratio at typical acquisition ranges. Basic contract SOW paragraph 3.2.2 applies.
- 3.2.3 The Contractor shall demonstrate that discrimination of the target cloud can be made with optical data alone. The Contractor shall demonstrate the exploitation of optical data in the visible through LWIR regions. Optical signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment. Basic contract SOW paragraph 3.2.3 applies.

- 3.2.4 The Contractor shall analyze active optical methods and evaluate potential contributions of the laser radar tracking data to BMD testing. These methods shall include incoherent and coherent laser radars and phenomenological issues related to optical propagation through the atmosphere. Basic contract SOW paragraph 3.2.4 applies.
- 3.2.5 The Contractor shall demonstrate the exploitation multi and hyperspectral optical signatures. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment. Basic contract SOW paragraph 3.2.5 applies.
- 3.2.6 The Contractor shall perform laser radar studies for advanced electro-optical sensor detection applications. Provide laser systems engineering support for safety and future deployment requirements and capabilities. Basic contract SOW paragraph 3.2.6 applies.
- 3.2.7 The Contractor shall investigate concepts and instrumentation techniques associated with developing optical sky screen capability to support target launch range safety requirements at PMRF. Basic contract SOW paragraph 3.2.7 applies.
- 3.2.8 The Contractor shall investigate photo-optical instrumentation techniques for supporting and covering target launches. Basic contract SOW paragraph 3.2.8 applies.
- 3.2.9 The Contractor shall perform analysis to validate results of the KIDD algorithm. This is to help verify range safety work with respect to debris. Basic contract SOW paragraph 3.2.1 applies.

### **3.3 Task Area C--Test Plans, Test reports, and Procedures.**

- 3.3.1 The Contractor shall review mission scenarios and preliminary and final test plans/requirements and provide input and recommendations to meet Government test objectives. For scenarios the Contractor shall include a flow-down of test objectives to the scenario requirements, and detailed definition/planning of the test scenario including target type, presentation, trajectory and timing. The test plans/requirements shall address, as applicable, target presentations, characteristics of the required targets and their expected performance parameters, timing, engagement geometry, multiple targets, range safety issues. Coordination with all personnel associated with the test operations is also required including ship personnel, range personnel, and all personnel associated with supporting sensors, instrumentation requirements, data collection, target definition, preliminary and final mission firing plans, and test operations. This task will require establishing a technical interface with multiple activities so that there is a clear understanding at an operational level of the technical issues. This effort shall require coordination with organizations such as Missile Defense Agency, NAVSEASCOM Program Executive Office Integrated Warfare Systems (PEO IWS), PMRF, Aegis BMD Program, United States Army Space and Missile Defense Command (USASMD), Air Force Space Systems Division, Air Force Maui Optical Station (AMOS)/ Maui Space Surveillance Site (MSSS); PMRF; SPAWAR, Naval Surface Warfare Center (NSWC) Corona, and other non-Navy organizations that are involved in the Navy T&E efforts. Basic contract SOW paragraph 3.3.1 applies.
- 3.3.2 The Contractor shall identify and recommend targets for testing to meet Government test objectives. The Contractor shall define target selection criteria and assessment of potential targets against those criteria. The selection criteria would include: (a) the degree to which candidate targets are good surrogates for the threat targets; (b) availability of launch platforms and ranges to support the target launches; (c) cost and schedule constraints; and (d) environmental considerations. The Contractor shall determine if T&E objectives can be met against targets of opportunity (TOOs) rather than dedicated targets. The Contractor shall identify potential TOOs (including Missile Defense Agency tests, operational missile tests, and space launches), and then correlate the sensor/test options associated with these targets against T&E objectives. Basic contract SOW paragraph 3.3.2 applies.

- 3.3.3 The Contractor shall define instrumentation requirements and data analysis products for BMD testing, and shall derive requirements for the data collection from all relevant sensors including: (a) telemetry from the targets and intercepting missiles; (b) tracking range radar support (independent of the AEGIS AN/SPY-1 radar); (c) photo-documentation sensors; (d) telescope sensors; and (e) ground-based and airborne, visible, Short Wave Infrared (SWIR), Mid-wave InfraRed (MWIR) and Long-wave InfraRed (LWIR) sensors. The Contractor shall identify existing tools for processing the data, identify any deficiencies, and correct these deficiencies by developing the necessary techniques to analyze the data. This process of identifying the final analysis products shall be incorporated into the test planning process. Mission test data from the AEGIS Weapons System shall also be included in the analyses. This will include collecting data necessary to support assessment of all aspects of system detection/control/engagements so that correlation can be made with data collected by electro-optical sensors and other telemetry (TM) and radar sources. This function also includes definition of collection requirements for range instrumentation and supporting sensors. The contractor shall assist with mission planning for land, sea, and air-based collection platforms. This includes reporting on viewing angles/limitations, illumination conditions, and other elements key to mission participation of sensors. The contractor shall identify data products required for post mission analyses in the DMAP (Data Management Analysis Plan prepared by NSWC Corona) that is prepared for each Aegis BMD mission. Basic contract SOW paragraph 3.3.3 applies.
- 3.3.4 The Contractor shall develop input for integrated test plans for utilizing ground, space, and mobile (air, sea) based optical sensor systems. Test plans will identify all test-planning procedures including pre-mission sensor testing, mission data collection, real-time data transmission, and post-mission data analysis. Test plans would also identify, among other things, specific data elements to be collected for data analysis, data products to be delivered, test limitations, communications, personnel, internal range readiness testing, simulations, target trajectory, and frequency management for data transmission. Basic contract SOW paragraph 3.3.4 applies.
- 3.3.5 The Contractor shall attend working group meetings as required for the Aegis BMD and THAAD programs including Instrumentation Working Groups (IWGs), Data Analysis Working Groups (DAWGs), Test and Evaluation Working Groups (TEWGs), Auxiliary Sensor Mission Readiness Reviews (ASMRRs) and other T&E planning meetings. Basic contract SOW paragraph 3.3.5 applies.
- 3.3.6 The Contractor shall develop input for Navy test and evaluation plans for evaluating the VTM's and the mobile optics capabilities of the SHOTS on the MATSS platform and at PMRF. Provide mission test conduct, test analysis support, government acceptance test planning, including data reduction analyses for both VTM's and SHOTS. Basic contract SOW paragraph 3.3.6 applies.
- 3.3.7 The contractor shall develop a master integrated test plan that combines under one document all of the auxiliary sensor test conduct requirements including test support positions (TSPs), communication frequencies, call signs, sensor requirements, test procedures, range safety factors, personnel required and POC's at PMRF, test schedules for the readiness test preps including the mission, timeline for mission conduct, data to be collected, and required reports for T+4 hrs, T+96 hrs, and T+ 30/60 days. Basic contract SOW paragraph 3.3.8 applies.
- 3.3.8 The contractor shall develop and produce auxiliary sensor quick books for each mission. The quick books will summarize all facets of the missions as they relate to auxiliary sensors. It will incorporate elements from IWG meetings, mission support plans, and other mission-related documents into a single booklet-style document. The document will be delivered primarily as hardcopies with a softcopy delivered on CD to the COR. Basic contract SOW paragraph 3.3.8 applies.
- 3.3.9 The contractor shall prepare post mission test reports, post mission briefings for T+ 72 hr data reviews, and post mission data analysis summaries of all Aegis BMD flight test missions. Basic contract SOW paragraph 3.3.1 applies.

#### **3.4 Task Area D--Test Data Collection Analysis and Test Data Review.**

- 3.4.1 The Contractor shall edit and correlate Infrared field and flight test data for repeatability and comparability, including processing and analyzing data from a diverse number of sources, AEGIS radar data, telemetry, range radar data, satellite data, sea-based, ground-, air-, and space-based optical and video data and shall analyze these data on a data analysis workstation to ensure that test objectives were met. The Contractor shall prepare test reports that compile analysis results and summarize findings. The Contractor shall provide the Government copies of the test reports and data packages in both hard copy and digital media. Basic contract SOW paragraph 3.4.1 applies.
- 3.4.2 The Contractor will support the analysis of specific issues related to electro-optics data collection and optics mount and sensor issues including mission requirements analysis for mount and sensor assignments on workstations in the PMRF DAC. Data will be ingested from multiple optical sensor sources for data reduction and analysis using the Tirade software. Basic contract SOW paragraph 3.4.2 applies.
- 3.4.3 The Contractor shall provide briefs and demonstrations of the workstations used to reduce optical data from Aegis BMD missions as required. Basic contract SOW paragraph 3.4.3 applies.
- 3.4.4 The Contractor shall support the software development for data reduction and analysis of the electro-optical sensor mission data sets to improve overall efficiency and accuracy of test data analysis. Basic contract SOW paragraph 3.4.4 applies.
- 3.4.5 The contractor shall support coordination with other optical sensor steering groups and committees, (CADR's) that involve comparison and data analysis of optical sensor results for Aegis BMD and THAAD flight test missions. Basic contract SOW paragraph 3.3.5 applies.

### **3.5 Task Area E--Test Monitoring and Real-Time Mission Support**

- 3.5.1 The Contractor shall attend test events to verify test requirements and procedures, monitor the test being conducted, and record test results/corrective actions as required. The Contractor shall report in real-time any observed problems and recommended corrective actions to the Government. Basic contract SOW paragraph 3.5.1 applies.
- 3.5.2 The Contractor shall assist in the development of an optical data analysis capability to support the reduction and analysis of optics data collected during test operations. Basic contract SOW paragraph 3.5.2 applies.
- 3.5.3 The Contractor shall provide real-time mission support for the collection of optics data. This effort shall include participation at the various optical mounts and sensor sites, as well as post-operation optics data reduction, analysis and reporting. Also included in this effort is active support for calibration, operation, data collection, analysis and reporting associated with the various optical sensors (Vis, NIR, SWIR, MWIR) aboard the Cast Glance airborne observation platform. Basic contract SOW paragraph 3.5.3 applies.
- 3.5.4 The contractor shall provide support for test planning, test conduct, data reduction and analysis, and reporting of all electro-optical sensor data collected during critical mission counter measures and other flight test missions. Basic contract SOW paragraph 3.5.4 applies.
- 3.5.5 Range Mission Tool (RMT) Support. The (RMT) is an event-planning and monitoring tool developed for the Pacific Missile Range Facility (PMRF) with the express capabilities to plan, rehearse, and monitor events taking place at PMRF, with a particular focus on Aegis Ballistic Missile Defense (Aegis BMD) events. The RMT is designed to plan an event, monitor changes from the plan as an exercise evolves, and provides real-time, interactive re-planning based on event objectives and constraints. This effort will provide engineering services for Optical Mission Planning support and direct mission support at the PMRF. All technical reports, trip reports, progress reports, and test reports in support of this particular task will be delivered to the TA/government. The contractor will not be developing or writing any software. Basic contract SOW paragraph 3.5.4 applies.

- 3.5.5.1 Optical Mission Planning: Demonstrate that RMT is able to preplan/plan the scenarios for the event. Verify Test Support Positions (TSP's) provided by the Participant Location Map (PLM) will provide the coverage required to meet the mission's test objectives.
- 3.5.5.2 RMT Event Support: Event support will take place at the PMRF. Support will include prior to the events the RMT will be used to plan the scenarios and load the GOG overlays containing the PLM data, hazard patterns and the trajectory data for the missiles being used during the event. RMT deficiencies during event support will be noted and reported. The Contractor shall provide a Trip Report after each mission event supported.
- 3.5.6 The contractor shall develop, procure, integrate, test, and assist with operation of new sensors (cameras, telescopes, radiometers, lenses, optical data processing software and processors, etc.) hosted on land, sea, and air platforms in support of Aegis BMD, THAAD, and/or other government specified/requested missile defense-related missions. This includes documentation of various steps toward hosting new sensors (test plans, acceptance plans, calibration, etc) and the execution of said plans. Analysis of data collected during integration and post-mission will also be performed by the contractor. This may also include the creation of an optics lab at the contractor's site to aid in the development of new sensors. Basic contract SOW paragraph 3.5.4 applies.
- 3.5.7 The contractor shall provide real-time data analysis to support payload typing. Data will be provided by auxiliary sensors supporting missions. Basic contract SOW paragraph 3.5.4 applies.
- 3.5.8 The contractor shall provide Launch Area Photographic System (LAPS) development and support. Basic contract SOW paragraph 3.5.3 applies.
- 3.5.9 The contractor shall provide support for coordinating guest sensor requirements on PMRF VTM's and SHOTS on MATSS and at PMRF. Basic contract SOW paragraph 3.5.4 applies.

### **3.6 Task Area F--Program Management Support.**

- 3.6.1 The Contractor shall review and provide input for BMD program documents including but not limited to BMD Operational Requirements Document (ORD), the Test and Evaluation Master Plan (TEMP), the Aegis Ballistic Missile FTM test plan, including the Integrated Test Plan (ITP), the Program Introduction (PI), and the Operational Requirement (OR) and Operational Directive (OD) for correctness, completeness, and determine if the documents meet Government objectives. This documentation will include the production of draft documents for Government review related to more detailed test plans. Basic contract SOW paragraph 3.6.1 applies.
- 3.6.2 The Contractor shall support the development of and provide input to a Program Support Plan and Flight Mission Test Plans to assist in identifying and ensuring that sensors meet the scenario test objectives and mission requirements. This will encompass determining the best use of optics and sensors, as well as the capabilities of auxiliary sensors to include but not be limited to the Stabilized High Accuracy Optical System (SHOTS) at PMRF and on the Mobile Aerial Target Support Ship (MATSS), Air Force Maui Optical Station (AMOS), the High Altitude Observatory (HALO I and II) aircraft sensors, including the Infrared Imaging System (IRIS), optical sensors aboard the NP-3D Cast Glance aircraft, the wide-body airborne sensor platform (WASP), and National Means Sensors. Basic contract SOW paragraph 3.6.2 applies.
- 3.6.3 The contractor shall provide support for development of the PMRF long range, strategic optical requirements capabilities. Basic contract SOW paragraph 3.6.2 applies.

### **3.7 Task Area G--Management Reports and Briefing Preparations.**

- 3.7.1 The Contractor using government furnished information (GFI) shall develop presentation materials such as digital images, view-graphs, slides, video tapes, and printed media in the form of reports, instructions, and other materials as required by program management in the support of tasking identified in section 3 of this SOW. The media used shall be electronic or digital wherever practical and/or hard copy as required. Basic contract SOW paragraph 3.7.1 applies.
- 3.7.2 The Contractor shall prepare Monthly Activity and Status Reports to the Contracting Officer's Representative (COR) as specified in each TO. The format and content for the reports will be specified in each TO. The media used to convey the reports shall be electronic or digital wherever practical and/or hard copy as required. Basic contract SOW paragraph 3.7.2 applies.
- 3.7.3 The Contractor shall provide technical and engineering support at engineering reviews, T&E engineering planning and coordination meetings, T&E operational planning and coordination meetings at various locations relevant to the planning and conduct of BMD events. The contractor shall provide reviews and minutes of meetings attended. Basic contract SOW paragraph 3.7.3 applies.
- 3.7.4 The contractor shall provide summary movies for missions including data collected by and performance of auxiliary sensors. These may be created during pre-mission, mission, and post-mission periods as required by the government. Basic contract SOW paragraph 3.7.1 applies.

#### **4.0 DATA DELIVERABLES**

- 4.1 Specific items of reports, test plans, procedures, technical support documentation, presentation materials, meeting minutes, and progress reports will be provided in accordance with Form DD-1423.
- 4.1.1 Technical Reports, IR Seeker Performance Analysis, in accordance with paragraph 3.1.5 (CDRL A003).
- 4.1.2 Technical Reports, Test Scenario and Requirements Analysis, in accordance with paragraphs 3.2.2 and 3.3.1 (CDRL A003).
- 4.1.3 Technical Reports, Target Definition Analysis, in accordance with paragraph 3.3.2 (CDRL A003).
- 4.1.4 Technical Reports, Instrumentation Requirements and Data Analysis Products, in accordance with paragraph 3.3.3 (CDRL A003).
- 4.1.5 Technical Report, Optical Sensor Systems Utilization, in accordance with paragraph 3.3.4 (CDRL A003).
- 4.1.6 Minutes/Reviews of meetings, in accordance with paragraph 3.3.5 (CDRL A002).
- 4.1.7 Technical Report, Mobile Optics Capabilities, in accordance with paragraph 3.3.6 (CDRL A003).
- 4.1.8 Technical Report, Auxiliary Sensor Test Requirements, in accordance with paragraph 3.3.7 (CDRL A003).
- 4.1.9 Technical Report, Infrared Field and Flight Test Data Analysis, in accordance with paragraph 3.4.1 (CDRL A003).
- 4.1.10 Presentation Materials, Optical Data Reduction Workstations, in accordance with paragraph 3.4.3 (CDRL A001).
- 4.1.11 Minutes/Reviews of meetings, in accordance with paragraph 3.5.1 (CDRL A002).
- 4.1.12 Technical Reports, BMD Requirements Documents Analysis, in accordance with paragraph 3.6.1 (CDRL A003).

- 4.1.13 Technical Reports, Program Support Plan, in accordance with paragraph 3.6.2 (CDRL A003).
- 4.1.14 Technical Reports, Flight Mission Test Plan, in accordance with paragraph 3.6.2 (CDRL A003).
- 4.1.15 Presentation materials in accordance with paragraph 3.7.1 (CDRL A001).
- 4.1.16 Periodic Status Reports (monthly) in accordance with paragraph 3.7.2 (CDRL A004).
- 4.1.17 Minutes/reviews of meetings in accordance with paragraph 3.7.3 (CDRL A002).
- 4.1.18 Auxiliary sensor data analysis/summary movies in accordance with paragraph 3.7.3 (CDRL A001).
- 4.1.19 Auxiliary Sensor Mission Quick Books summarizing mission sensors, objectives, schedules, etc. in accordance with paragraph 3.3.8 (CDRL A001).
- 4.1.20 Technical Reports, Sensor design or recommendation studies for new sensors in accordance with paragraph 3.1.10 (CDRL A003).
- 4.1.21 Calibration procedures/reports in accordance with paragraph 3.5.3 (CDRL A003).
- 4.1.22 Technical Reports, Post-Mission reports for flight test or other requested missions in accordance with paragraph 3.5.3 (CDRL A003).
- 4.1.23 Technical Reports, Range Mission Tool (RMT) reports/progress reports/trip reports in accordance with paragraph 3.5.5 (CDRL A003).

## **5.0 SPECIAL CONSIDERATIONS.**

- 5.1 Security. The Contractor shall perform work up to the level of SECRET in the performance of this contract in accordance with applicable DD-254.
- 5.2 Government Facility Access.
  - 5.2.1 The Contractor will require access to Naval Base Ventura County (NBVC), restricted areas of the Industrial Areas at Point Mugu, CA, access to Marine Corps Base Hawaii Kanehe Bay (KBay), Hickham Air Force Base, HI, Pearl Harbor, HI and other bases utilized for air platform support.
  - 5.2.2 The Contractor will require access to Pacific Missile Range Facility (PMRF) at Barking Sands, Kauai, HI.
  - 5.2.3 The Contractor will require access to Maui Space Surveillance Site (MSSS) and Air Force Maui Optical Station (AMOS), Maui, HI.
  - 5.2.4 The Contractor will require access to White Sands Missile Range (WSMR), NM.
  - 5.2.5 After hours access may be required.
- 5.3 Government-Furnished Property. None.
- 5.4 Government-Furnished Data/Access.
  - 5.4.1 The Contractor will be provided access to the data itemized in paragraph 2.2.
  - 5.4.2 The Contractor will not be provided Government facilities workspace.

5.4.5 The Contractor will be sponsored for SIPRNET installation at the contractor's facility.

5.5 Travel.

5.5.1 All requests for travel will be submitted in writing to the Technical Assistant (TA) via the Contracting Officer's Representative (COR) for approval at least two (2) weeks prior to occurrence. Each travel request will include budgeted travel amount, projected cost for requested trip and balance remaining. Each travel request will itemize duration, airfare, and cost of lodging, per diem, car rental, miscellaneous and names of traveler(s). Travel in support of this task order is anticipated to be as follows:

TRIPS	PEOPLE	DAYS	FROM	TO
4	1	7	San Diego, CA	Huntsville, AL
2	6	2	San Diego, CA	Tucson, AZ
7	1	3	San Diego, CA	Naval Base Ventura County (NBVC), CA
1	1	1	San Diego, CA	Naval Base Ventura County (NBVC), CA
6	4	1	San Diego, CA	Pt Mugu, CA
1	1	5	San Diego, CA	Colorado Springs, CO
4	2	5	San Diego, CA	Washington, DC
6	1	5	San Diego, CA	Washington, DC
2	1	5	San Diego, CA	Moorestown, NJ
4	1	5	San Diego, CA	Kauai, HI
5	2	11	San Diego, CA	Kauai, HI
5	5	11	San Diego, CA	Kauai, HI
6	1	4	San Diego, CA	Maui, HI
2	1	10	San Diego, CA	Oahu, HI
2	1	3	San Diego, CA	Monterey, CA
6	1	5	San Diego, CA	Albuquerque, NM
6	1	11	San Diego, CA	Oahu, HI
12	1	3	San Diego, CA	Pt Mugu, CA
6	1	5	San Diego, CA	White Sands, NM
6	1	5	San Diego, CA	Cape Canaveral, FL
1	1	11	Kauai, HI	Boston, MA
1	1	11	Kauai, HI	Tullahoma, TN
2	1	7	Kauai, HI	Huntsville, AL
1	1	4	Kauai, HI	Los Angeles, CA
5	1	5	Kauai, HI	Washington, DC
6	1	2	Kauai, HI	Maui, HI
3	1	3	Kauai, HI	San Diego, CA
6	1	3	Kauai, HI	Oahu, HI
4	2	4	Maui, HI	Kauai, HI
4	2	5	Maui, HI	San Diego, CA

5.6 Training. None.

5.7 Materials/Supplies.

5.7.1 Small value materials and supplies may be required in the performance of this Contract.

5.7.2 Materials in support of electro-optical/surveillance sensors including photo-optical and command and control and communication systems instrumentation utilized to support testing, may be required in the performance of this contract.

**6.0 GOVERNMENT POINTS OF CONTACT.****Contracting Officer's Representative (COR):**

Ex b(6)

NAVAIR WD Code 52100ME

Point Mugu, CA 93042-5049

Work: (805) Ex b(6)

FAX: (805) 989-8440

e-mail: Ex b(6)

**Technical Assistant (TA):**

Ex b(6)

NAVAIR WD Code 511200E

Point Mugu, CA 93042-5049

Work: (805) Ex b(6)

FAX: (805) 989-0585

Cell: (805) Ex b(6)

e-mail: Ex b(6)

**7.0 Quality Assurance Surveillance Plan**

<b>Performance Standard (Expectations)</b>	<b>Acceptable Quality Level</b>	<b>Inspection Type and Frequency</b>	<b>Incentive or Remedy</b>
Appropriate SOW tasking is performed without causing programmatic delay to the government. All products are submitted timely.	<b>Satisfactory:</b> Performance and deliverables meet the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Performance and deliverables result in moderate delay or impact to the program.	Each category will be evaluated every six (6) months and will be based upon government teammates' evaluations conducted throughout the performance period. The overall performance rating will be assigned by the Task Order Manager (TOM) and subject to COR approval.	<b>Satisfactory:</b> 100% fee <b>Marginal:</b> 50% fee <b>Unsatisfactory:</b> 0% fee
Analysis methodology and deliverables are consistent, reflective of sound industry practices, and data deliverables are clear, concise, thorough and complete in accordance with (IAW) referenced CDRLs.	<b>Unsatisfactory:</b> Performance and deliverables result in unacceptable delay or impact to the program.		
Management and teaming allow seamless integration among government and contractor teammates. The contractor takes a proactive role in resolving issues. Issues identified by the government are addressed and resolved in a timely fashion.	<b>Satisfactory:</b> Performance meets the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Performance leaves many questionable situations for government resolution. <b>Unsatisfactory:</b> Teaming is discordant and the contractor is not proactive.		

<p>Costs incurred and hours expended is commensurate with the services performed and products delivered, translating into value to the government. All funding and cost status reports are accurate and complete and submitted in accordance with contract requirements.</p>	<p><b>Satisfactory:</b> Contractor meets the standard with few exceptions, which are easily corrected.  <b>Marginal:</b> Contractor's expenditure of costs and hours are sometimes not appropriate for the performance and deliverables provided.  <b>Unsatisfactory:</b> Contractor's expenditure of costs and hours are not appropriate for the performance and deliverables provided.</p>		
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## Section E - Inspection and Acceptance

## INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government
000101	Destination	Government	Destination	Government
0002	Destination	Government	Destination	Government

## Section F - Deliveries or Performance

## DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	POP 20-JUN-2008 TO 06-SEP-2009	N/A	N/A FOB: Destination	
000101	POP 20-JUN-2008 TO 06-SEP-2009	N/A	N/A FOB: Destination	
0002	POP 20-JUN-2008 TO 06-SEP-2009	N/A	N/A FOB: Destination	

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930 NH2C 252 77777 0 050120 2F 000000

COST CODE: WC058PR00336

AMOUNT: \$200,000.00

CIN 130010015200001: \$200,000.00

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.232-22            Limitation Of Funds

APR 1984

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 01	3. EFFECTIVE DATE 30-Jun-2008	4. REQUISITION/PURCHASE REQ. NO. 1300100152		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVM CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X	10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande082275 See Page 2 for the purpose of this modification.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 30-Jun-2008	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to add the following:

Material

Purchase of material with a unit cost of \$5,000 or less does not require prior government approval.

Subcontracts

In accordance with FAR Clause 52.244-2, Subcontracts, the following subcontracts are added:

Ex b(4)

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   3	
2. AMENDMENT/MODIFICATION NO. 02	3. EFFECTIVE DATE 28-Jul-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X	10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: jacobsmk082446 Incremental Funding					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 28-Jul-2008	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$198,200.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000102 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000102	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300109779				\$0.00
	ACRN AB CIN: 130010977900001				\$61,000.00

SUBCLIN 000103 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000103	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300109825				\$0.00
	ACRN AC CIN: 130010982500001				\$137,200.00

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$198,200.00 from \$200,000.00 to \$398,200.00.

SUBCLIN 000102:

Funding on SUBCLIN 000102 is initiated as follows:

ACRN: AB

CIN: 130010977900001

Acctng Data: 9770400 8ABF 253 SA452 0 068342 2D 054060

Increase: \$61,000.00

Total: \$61,000.00

Cost Code: 0302A0000000

SUBCLIN 000103:

Funding on SUBCLIN 000103 is initiated as follows:

ACRN: AC

CIN: 130010982500001

Acctng Data: 9770400 8ACA 253 SA452 0 068342 2D 054060

Increase: \$137,200.00

Total: \$137,200.00

Cost Code: 0302A0000000

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2	
2. AMENDMENT/MODIFICATION NO. 03	3. EFFECTIVE DATE 14-Aug-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X	10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: jacobsmk082501 Incremental Funding					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16C. DATE SIGNED	
_____ (Signature of person authorized to sign)		16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)		14-Aug-2008	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$400,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000104 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000104	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300110181				
	ACRN AD CIN: 130011018100001				\$400,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$400,000.00 from \$398,200.00 to \$798,200.00.

SUBCLIN 000104:

Funding on SUBCLIN 000104 is initiated as follows:

ACRN: AD

CIN: 130011018100001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$400,000.00

Total: \$400,000.00

Cost Code: A00000014291

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   4
2. AMENDMENT/MODIFICATION NO. 04	3. EFFECTIVE DATE 09-Sep-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 220000D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: jacobsmk082797 See Page 2 herein.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 09-Sep-2008
(Signature of person authorized to sign)		(Signature of Contracting Officer)		

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$210,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000105 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000105	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300112061				\$0.00
	ACRN AE CIN: 130011206100001				\$20,000.00

SUBCLIN 000106 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000106	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300112059				\$0.00
	ACRN AF CIN: 130011205900001				\$90,000.00

SUBCLIN 000107 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000107	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300112048				\$0.00
	ACRN AG CIN: 130011204800001				\$50,000.00

SUBCLIN 000108 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000108	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300112062				\$0.00
	ACRN AH CIN: 130011206200001				\$50,000.00

#### SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$210,000.00 from \$798,200.00 to \$1,008,200.00.

SUBCLIN 000105:

Funding on SUBCLIN 000105 is initiated as follows:

ACRN: AE

CIN: 130011206100001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$20,000.00

Total: \$20,000.00

Cost Code: A00000033167

SUBCLIN 000106:

Funding on SUBCLIN 000106 is initiated as follows:

ACRN: AF

CIN: 130011205900001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$90,000.00

Total: \$90,000.00

Cost Code: A00000033165

SUBCLIN 000107:

Funding on SUBCLIN 000107 is initiated as follows:

ACRN: AG

CIN: 130011204800001

Acctng Data: 9780400 2520 8BM 25203 0 603175 C0 0255XM D8W125A5P516 8820489 S12135

Increase: \$50,000.00

Total: \$50,000.00

SUBCLIN 000108:

Funding on SUBCLIN 000108 is initiated as follows:

ACRN: AH

CIN: 130011206200001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$50,000.00

Total: \$50,000.00

Cost Code: A00000033171

FMS Case Number: Ex b(4)

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 05	3. EFFECTIVE DATE 03-Nov-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: jacobsmk09125 Funding				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 03-Nov-2008
(Signature of person authorized to sign)		(Signature of Contracting Officer)		

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$400,000, and to add the FMS marking to SubCLIN 000104.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000109 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000109	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300115825				\$0.00
	ACRN AJ CIN: 130011582500001				\$400,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$400,000.00 from \$1,008,200.00 to \$1,408,200.00.

SUBCLIN 000104:

The FMS Case Number Ex b(4) has been added. The country is Ex b(4)

SUBCLIN 000109:

Funding on SUBCLIN 000109 is initiated as follows:

ACRN: AJ

CIN: 130011582500001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$400,000.00

Total: \$400,000.00

Cost Code: A00000074058

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 06	3. EFFECTIVE DATE 10-Dec-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
CODE 7N694			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: jacobsmk09417 Funding				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>	16C. DATE SIGNED 10-Dec-2008
(Signature of person authorized to sign)			(Signature of Contracting Officer)	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$5,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000110 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000110	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300118243				\$0.00
	ACRN AK CIN: 130011824300001				\$5,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$5,000.00 from \$1,408,200.00 to \$1,413,200.00.

SUBCLIN 000110:

Funding on SUBCLIN 000110 is initiated as follows:

ACRN: AK

CIN: 130011824300001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$5,000.00

Total: \$5,000.00

Cost Code: A00000098449

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   3
2. AMENDMENT/MODIFICATION NO. 07	3. EFFECTIVE DATE 19-Dec-2008	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: jacobsmk09587 Funding				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>	16C. DATE SIGNED 19-Dec-2008
(Signature of person authorized to sign)			(Signature of Contracting Officer)	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$538,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000111 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000111	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300119570				\$0.00
	ACRN AL CIN: 130011957000001				\$30,000.00

SUBCLIN 000112 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000112	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300119569				\$0.00
	ACRN AM CIN: 130011956900002				\$243,000.00

SUBCLIN 000113 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000113	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300119568				\$0.00
	ACRN AN CIN: 130011956800001				\$265,000.00

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$538,000.00 from \$1,413,200.00 to \$1,951,200.00.

SUBCLIN 000111:

Funding on SUBCLIN 000111 is initiated as follows:

ACRN: AL

CIN: 130011957000001

Acctng Data: 1791804 70CA 251 00070 M 045924 2D X3R105

Increase: \$30,000.00

Total: \$30,000.00

Cost Code: 0534A9THA8QQ

SUBCLIN 000112:

Funding on SUBCLIN 000112 is initiated as follows:

ACRN: AM

CIN: 130011956900002

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$243,000.00

Total: \$243,000.00

Cost Code: A10000110535

SUBCLIN 000113:

Funding on SUBCLIN 000113 is initiated as follows:

ACRN: AN

CIN: 130011956800001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$265,000.00

Total: \$265,000.00

Cost Code: A00000110479

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 08	3. EFFECTIVE DATE 26-Jan-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
CODE 7N694			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
FACILITY CODE			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: jacobsmk09839 Funding				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>	16C. DATE SIGNED 26-Jan-2009
(Signature of person authorized to sign)			(Signature of Contracting Officer)	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$37,500.00.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000114 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000114	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300120515				\$0.00
				MAX COST	\$0.00
				FIXED FEE	\$0.00
				TOTAL MAX COST + FEE	\$0.00
	ACRN AP CIN: 130012051500001				\$37,500.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$37,500.00 from \$1,951,200.00 to \$1,988,700.00.

SUBCLIN 000114:

Funding on SUBCLIN 000114 is initiated as follows:

ACRN: AP

CIN: 130012051500001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$37,500.00

Total: \$37,500.00

Cost Code: A00000118987

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   3
2. AMENDMENT/MODIFICATION NO. 09	3. EFFECTIVE DATE 11-Feb-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
CODE 7N694			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
FACILITY CODE			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: jacobsmk091078 Funding				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>	16C. DATE SIGNED 11-Feb-2009
(Signature of person authorized to sign)			(Signature of Contracting Officer)	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$105,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000115 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000115	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300122144				\$0.00
	ACRN AQ CIN: 130012214400001				\$30,000.00

SUBCLIN 000116 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000116	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300122187				\$0.00
	ACRN AR CIN: 130012218700001				\$75,000.00

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$105,000.00 from \$1,988,700.00 to \$2,093,700.00.

SUBCLIN 000115:

Funding on SUBCLIN 000115 is initiated as follows:

ACRN: AQ

CIN: 130012214400001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$30,000.00

Total: \$30,000.00

Cost Code: A00000137823

SUBCLIN 000116:

Funding on SUBCLIN 000116 is initiated as follows:

ACRN: AR

CIN: 130012218700001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$75,000.00

Total: \$75,000.00

Cost Code: A00000138535

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 10	3. EFFECTIVE DATE 04-May-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande091801 See Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 04-May-2009
(Signature of person authorized to sign)		(Signature of Contracting Officer)		

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$30,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000117 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000117	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300126548				
	ACRN AS CIN: 130012654800001				\$30,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$30,000.00 from \$2,093,700.00 to \$2,123,700.00.

SUBCLIN 000117:

Funding on SUBCLIN 000117 is initiated as follows:

ACRN: AS

CIN: 130012654800001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$30,000.00

Total: \$30,000.00

Cost Code: A00000187867

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 11	3. EFFECTIVE DATE 27-May-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande091978 See Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 27-May-2009
(Signature of person authorized to sign)		(Signature of Contracting Officer)		

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$80,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000118 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000118	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300127924				\$0.00
	ACRN AT CIN: 130012792400001				\$80,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$80,000.00 from \$2,123,700.00 to \$2,203,700.00.

SUBCLIN 000118:

Funding on SUBCLIN 000118 is initiated as follows:

ACRN: AT

CIN: 130012792400001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$80,000.00

Total: \$80,000.00

Cost Code: A00000201903

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 12	3. EFFECTIVE DATE 19-Jun-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande092248 See Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16C. DATE SIGNED
_____ (Signature of person authorized to sign)				16B. UNITED STATES OF AMERICA BY <u>Mary Jacobs</u> (Signature of Contracting Officer)
				19-Jun-2009

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$30,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000119 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000119	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300129548				\$0.00
	ACRN AU CIN: 130012954800001				\$30,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$30,000.00 from \$2,203,700.00 to \$2,233,700.00.

SUBCLIN 000119:

Funding on SUBCLIN 000119 is initiated as follows:

ACRN: AU

CIN: 130012954800001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$30,000.00

Total: \$30,000.00

Cost Code: A00000219400

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 13	3. EFFECTIVE DATE 07-Jul-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
CODE 7N694			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
FACILITY CODE			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande092355 See Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 07-Jul-2009

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$20,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000120 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000120	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300130361				\$0.00
	ACRN AV CIN: 130013036100001				\$20,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$20,000.00 from \$2,233,700.00 to \$2,253,700.00.

SUBCLIN 000120:

Funding on SUBCLIN 000120 is initiated as follows:

ACRN: AV

CIN: 130013036100001

Acctng Data: 1791804 70CA 251 00070 M 045924 2D X3R670

Increase: \$20,000.00

Total: \$20,000.00

Cost Code: 0534A9THD9QQ

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 14	3. EFFECTIVE DATE 23-Jul-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: E. STRAND (760) 939-7309 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: strande092475 See Page 2 for the purpose of this modification.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 23-Jul-2009

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

The purpose of this modification is to incrementally fund \$5,000.

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000121 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000121	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300131366				
	ACRN AW CIN: 130013136600001				\$5,000.00

## SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$5,000.00 from \$2,253,700.00 to \$2,258,700.00.

SUBCLIN 000121:

Funding on SUBCLIN 000121 is initiated as follows:

ACRN: AW

CIN: 130013136600001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000 A00000240760

MIPR No: MD9B105I0P4547

Increase: \$5,000.00

Total: \$5,000.00

(End of Summary of Changes)

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE U	PAGE OF PAGES 1   3
2. AMENDMENT/MODIFICATION NO. 15	3. EFFECTIVE DATE 02-Sep-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCWD CODE 254300D ATTN: J. FARIA (760) 939-3728 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
CODE 7N694			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
FACILITY CODE			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) FAR 52.232-22, Limitation of Funds				
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: farij092877 The purpose of this modification is to add incremental funding.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARTIE A HICKS / PROCURING CONTRACTING OFFICER TEL: (760) 939-2983 EMAIL: martie.hicks@navy.mil	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>M.A. Hicks</i>		16C. DATE SIGNED 02-Sep-2009
(Signature of person authorized to sign)		(Signature of Contracting Officer)		

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000122 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000122	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300134521	UNDEFINED		UNDEFINED	\$0.00
				MAX COST	\$0.00
				FIXED FEE	\$0.00
				<hr/>	\$0.00
				TOTAL MAX COST + FEE	\$0.00
	ACRN AX CIN: 130013452100001				\$33,816.00

SECTION E - INSPECTION AND ACCEPTANCE

The following Acceptance/Inspection Schedule was added for SUBCLIN 000122:

INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
N/A	N/A	N/A	N/A

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$33,816.00 from \$2,258,700.00 to \$2,292,516.00.

SUBCLIN 000122:

Funding on SUBCLIN 000122 is initiated as follows:

ACRN: AX

CIN: 130013452100001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$33,816.00

Total: \$33,816.00

Cost Code: A00000271672

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 16	3. EFFECTIVE DATE 30-Sep-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY CDR NAWCVM CODE 254300D ATTN: M. HICKS (760) 939-2983 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X 10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0004	
			X 10B. DATED (SEE ITEM 13) 23-Jun-2008	
CODE 7N694	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
X D. OTHER (Specify type of modification and authority) FAR 43.103(a)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: hicksm093017 The purpose of this modification is to deobligate excess funding.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARTIE A HICKS / PROCURING CONTRACTING OFFICER TEL: (760) 939-2983 EMAIL: martie.hicks@navy.mil	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>M.A. Hicks</u>		16C. DATE SIGNED 30-Sep-2009
(Signature of person authorized to sign)		(Signature of Contracting Officer)		

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was decreased by \$235,000.00 from \$2,292,516.00 to \$2,057,516.00.

SUBCLIN 000115:

AQ: 97X4930 NH2C 252 77777 0 050120 2F 000000 A00000137823 (CIN 130012214400001) was decreased by \$30,000.00 from \$30,000.00 to \$0.00

SUBCLIN 000116:

AR: 97X4930 NH2C 252 77777 0 050120 2F 000000 A00000138535 (CIN 130012218700001) was decreased by \$75,000.00 from \$75,000.00 to \$0.00

SUBCLIN 000117:

AS: 97X4930 NH2C 252 77777 0 050120 2F 000000 A00000187867 (CIN 130012654800001) was decreased by \$30,000.00 from \$30,000.00 to \$0.00

SUBCLIN 000118:

AT: 97X4930 NH2C 252 77777 0 050120 2F 000000 A00000201903 (CIN 130012792400001) was decreased by \$80,000.00 from \$80,000.00 to \$0.00

SUBCLIN 000120:

AV: 1791804 70CA 251 00070 M 045924 2D X3R670 0534A9THD9QQ (CIN 130013036100001) was decreased by \$20,000.00 from \$20,000.00 to \$0.00

(End of Summary of Changes)

# ORDER FOR SUPPLIES OR SERVICES

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. <b>N68936-04-D-0026</b>		2. DELIVERY ORDER/ CALL NO. <b>0005</b>		3. DATE OF ORDER/ CALL (YYYYMMDD) <b>2009 Sep 06</b>		4. REQ./ PURCH. REQUEST NO. <b>1300133702</b>		5. PRIORITY <b>DO-C9</b>	
6. ISSUED BY CDR NAWCWD CODE 254200D ATTN: D. GEARY (760) 939-2654 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108				7. ADMINISTERED BY (if other than 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) <b>SEE SCHEDULE</b>		8. DELIVERY FOB <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER  (See Schedule if other)	
9. CONTRACTOR PHOTON RESEARCH ASSOCIATES, INC. NAME WM. JERRY GRIFFITH AND 9985 PACIFIC HEIGHTS BLVD STE 200 ADDRESS SAN DIEGO CA 92121-1723		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) <b>SEE SCHEDULE</b>		11. MARK IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED		12. DISCOUNT TERMS Net 30 Days			
14. SHIP TO <b>SEE SCHEDULE</b>		15. PAYMENT WILL BE MADE BY DFAS - COLUMBUS CENTER WEST ENTITLEMENT OPERATIONS PO BOX 182381 COLUMBUS OH 43218-2381		13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Item 15		11. MARK IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED			
16. TYPE OF ORDER		DELIVERY/ CALL		PURCHASE		This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract. Reference your quote dated Furnish the following on terms specified herein. REF:			
ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.									
NAME OF CONTRACTOR			SIGNATURE			TYPED NAME AND TITLE			DATE SIGNED (YYYYMMDD)
<input checked="" type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies: <b>2</b>									
17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE <b>See Schedule</b>									
18. ITEM NO.	19. SCHEDULE OF SUPPLIES/ SERVICES				20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE		23. AMOUNT
<b>SEE SCHEDULE</b>									
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.			24. UNITED STATES OF AMERICA TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil BY: MARY K. JACOBS			<i>Mary Jacobs</i> CONTRACTING / ORDERING OFFICER		25. TOTAL \$4,240,291.00	26. DIFFERENCES
27a. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED									
b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE					c. DATE (YYYYMMDD)		d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE		
e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE					28. SHIP NO.	29. DO VOUCHER NO.	30. INITIALS		
f. TELEPHONE NUMBER		g. E-MAIL ADDRESS			<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	32. PAID BY		33. AMOUNT VERIFIED CORRECT FOR	
36. I certify this account is correct and proper for payment.					31. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL			34. CHECK NUMBER	
a. DATE (YYYYMMDD)	b. SIGNATURE AND TITLE OF CERTIFYING OFFICER								35. BILL OF LADING NO.
37. RECEIVED AT		38. RECEIVED BY		39. DATE RECEIVED (YYYYMMDD)	40. TOTAL CONTAINERS	41. S/R ACCOUNT NO.	42. S/R VOUCHER NO.		

## Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT		MAX AMOUNT
0001	Engineering Services CPFF	19,533	Hours		\$4,240,291.00
	Engineering services in support of test and evaluation and systems engineering activities related to AEGIS BMD and THAAD Programs to include operations research support, physics analysis, test plans and procedures, test data collection analysis and test data review, test monitoring and real-time mission support, program management support, management reports, and briefing preparations. Support to be provided primarily at Pacific Missile Range Facility, Barking Sands, Kauai, Hawaii.				
	FOB: Destination				
				MAX COST	\$3,917,128.00
				FIXED FEE	\$323,163.00
				TOTAL MAX COST + FEE	<u>\$4,240,291.00</u>

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000101	For Navy Accounting Purposes Only CPFF				\$0.00
	FOB: Destination				
	PURCHASE REQUEST NUMBER: 1300133702				
	ACRN AA CIN: 130013370200001				\$545,000.00

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0002	Technical Data CPFF The Contractor shall provide Technical Data in accordance with the Contract Data Requirements List (CDRLs) in the Basic Contract. FOB: Destination	1	Lot		NSP
TOTAL MAX COST					\$0.00

B-NSTD-04

## B-NSTD-04 MATERIALS AND SUPPLIES

- (a) The contractor shall be reimbursed for the actual cost of materials purchased or materials withdrawn from the contractor's store or warehouse (other than general office supplies) for the performance of work pursuant to the requirements set forth in the Statement of Work less any cash or quantity discount earned, plus mark-up for general and administrative expenses but without any mark-up for fee.
- (b) Title to all property acquired in accordance with the paragraph above for the performance of work hereunder shall rest in the Government. Only materials and supplies directly required by the Statement of Work are included.
- (c) The contractor shall not acquire any single item or system valued at the threshold amount specified in individual delivery orders without a written proposal to do so and an written approval of the Contracting Officer's Representative (COR); or acquire any single item or system or any single purchase order valued at \$5,000.00 or more without proposal to do so and a written approval of the COR and the Contracting Officer.

## Section C - Descriptions and Specifications

SOW WITH QASP**PERFORMANCE WORK STATEMENT****Ballistic Missile Defense (BMD) Engineering Services****1.0 INTRODUCTION**

- 1.1 **BACKGROUND.** The mission of the Naval Air Warfare Center Weapons Division (NAVAIR WD), Point Mugu, CA, is to be the Navy's full-spectrum Research, Development, Test and Evaluation (RDT&E), and In-service Engineering Center for weapons systems associated with Naval warfare, missiles and missile subsystems and supporting systems, weapons integration, and assigned electronic warfare systems. This responsibility includes performing Developmental and Operational Testing and Evaluation (DOT&E); full operational support and planning for each operation; coordination of post-exercise analysis; and support for Naval Surface Weapons Anti-Air Warfare (AAW) T&E operations and Aegis BMD/fleet exercises throughout the United States.
- 1.2 **MISSION.** The mission of the Missile Defense Agency (MDA) under the Office of the Secretary of Defense (OSD) is to develop and field an integrated ballistic Missile Defense System (BMDS) capable of providing a layered defense for the United States and its deployed forces, friends and allies against ballistic missiles of all ranges in all phases of flight. MDA is responsible for research, development, testing and evaluation. Using complementary interceptors, sensors, and Battle Management Command and Control Systems, the planned missile defense system will be able to engage all classes and ranges of ballistic missile threats. Missile defense elements being developed and tested by MDA are primarily based on a hit-to-kill technology.
- 1.2.1 One of the weapon systems elements presently under development as part of the MDA strategy is to deploy sea-based interceptors to defend against ballistic missile target threats. The Navy's Aegis Ballistic Missile Defense (BMD), program will provide protection against medium/long-range ballistic missile threats for vital political and military assets based on available Sea Room and Ship Operating Areas. The Aegis BMD system requirements are to conduct engagements with STANDARD Missile 3 BLK 1A (SM-3) intercept missiles of exo-atmospheric ballistic missile threats in the ascending phase after launch, near apogee during mid-course along the trajectory, and during the descent phase near impact. The Navy Theater Wide (NTW) Program builds on the Navy's Aegis Leap Intercept (ALI) and NTW testing of the Aegis Weapon System (AWS) and the SM-3. The NTW design assumes completion of Navy modifications to the AWS including weapons control, SPY-1 Radar, Command and Control Systems, and the SM-3. These modifications when completed will be known as the Aegis BMD 4.0 configuration. Completion date is currently FY 2014.
- 1.2.2 Contractor support includes a series of planned demonstrations leading up to Developmental Test/Operational Test (DT/OT) for an integrated BMD system.
- 1.3 **SCOPE.** This statement of work (SOW) covers engineering services to be provided to the NAVAIR WD, Point Mugu, CA. Services to be provided are in support of Test and Evaluation (T&E) and systems engineering activities related to Aegis BMD, and other MDA-related Programs at PMRF. Tasking includes Operations Research Support, Physics Analysis, Test Plans and Procedures, Test Data Collection Analysis and Test Data Review, Test Monitoring and Real-Time Mission Support, Program Management Support, Management Reports and Briefing Preparations. Support shall be provided at various national test ranges as required including the Pacific Missile Range Facility (PMRF), Barking Sands, Kauai, HI.

- 1.4 **PERFORMANCE BASED.** This statement of work is performance based and all associated work shall be performed in accordance with the Quality Assurance Surveillance Plan.
- 1.5 **PERIOD OF PERFORMANCE.** The period of performance of this task order shall be from 06 September 2009 through 05 September 2010 to cover JFTM-3 Events 1,2,3 and FTX-06 events 2,2,4 currently scheduled for Oct/Nov 2009, THAAD FTT-11 currently scheduled for Dec 2009, THAAD FTT-12 currently scheduled for March 2009, FTM-15 currently scheduled for June 2009, FTM-16 events 1 and 2 currently scheduled for July/Aug 2010, and, JFTM-4 Events 1, 2,3 currently scheduled for Fall 2010 and other Aegis, or MDA-related missions as requested, pre-mission planning support at PMRF and all post-mission analysis. Exercise dates are subject to change by the Aegis BMD Program Office.

## **2.0 APPLICABLE DOCUMENTS**

The following list of documents will be made available, if required by the contractor, to perform the tasks defined in this contract, and is not intended to be all-inclusive, but is given as a point of reference. Additional applicable documents will be provided as required.

- 2.1 System Specification Navy Area, Theater Ballistic Missile Defense (TBMD) Systems Requirements Document (U), dated 13 March 1999
- 2.2 TEMP 1459-1 Test & Evaluation Master Plan Number 1459-1 for the Navy Theater Wide (NTW) TBMD, dated Sep 1998
- 2.3 DOD 5000.e Test and Evaluation
- 2.4 OPNAVINST 3960-10 Test and Evaluation
- 2.5 Aegis Ballistic Missile Defense Flight Mission (FM) Test Plan

- 3.0 REQUIREMENTS.** The Government will provide the Contractor format requirements, GFI engineering source data, and tasking due dates via email notification. Contractor format is authorized except in cases where the Government will define the format via email notification.

### **3.1 Task Area A--Operations Research Support.**

- 3.1.1 The Contractor shall perform technical analyses related to the performance of land based, sea-based, airborne, and space-based electro-optical sensor systems including National Means Sensors (NMS). This effort will include assessing target detectability (with respect to expected thresholds for the sensor), identification and discrimination ensuring that the experiment is planned so as to be consistent with sensor systems constraints (e.g. background issues, sensor locations, etc.). Analyses will include sensor data fusion and correlation. This effort will build on the analysis products developed during extended tracking and control exercise (ET&CE) and the Aegis BMD FM-2, FM-3, FM-4, FM-5, FM-6, FM-7, FTM-8, FTM-10, FTM-11, FTM-12, FTM-13, JFTM-1, FTM-14, JFTM-2, Stellar Daggers, Stellar Avenger and FTX-06 Event 1 missions. Basic contract SOW paragraph 3.1.1 applies.
- 3.1.2 The Contractor shall develop, evaluate, and/or execute threat models to predict the visible and Infrared (IR) signatures of Navy BMD threats. The models shall include sensitivities of model predictions to parameters, and infrared characterization and modeling of various taxonomies. The Contractor shall assess and validate the model results using Government furnished measurement data to determine if the models accurately predict IR BMD threat signatures for target identification and potential applications to target discrimination. Basic contract SOW paragraph 3.1.2 applies.

- 3.1.3 The Contractor shall assess, apply, and adapt Government furnished discrimination algorithms to BMD threat systems to assist in the development of IR seeker Target Object Map (TOM) functions. This will include algorithms that exploit mean intensity, multicolor temperature-based features, and temporal-based features. Complementary information from multiple sources to assess target/interceptor events shall include metric accuracy data (the difference between measured and truth trajectory) and signature fusion. A discrimination solution for a particular system shall be tailored to the system threat, sensor design, and available processing power. The total solution for an interceptor can incorporate narrow band or wide band radar information, metric information, and optical radiometric data. Basic contract SOW paragraph 3.1.3 applies.
- 3.1.4 The Contractor shall adapt the Battlespace Environmental Signatures Toolkit (BEST), and its supporting databases to the BMD requirements. The model shall produce IR scenes for use in seeker evaluations and real-time hardware-in-the-loop simulations. Basic contract SOW paragraph 3.1.4 applies.
- 3.1.5 The Contractor shall analyze the IR seeker to determine the system performance during engagements. Analysis shall include detection, tracking, discrimination, and aim point selection. The Contractor shall provide recommendations for any improvements based on the analysis, and also support any post mission analyses required for examining the root cause(s) of any missile staging/ intercept anomalies. Basic contract SOW paragraph 3.1.5 applies.
- 3.1.6 The Contractor shall define optimum electro-optical sensor data distribution architecture methods for near-real-time application based on web technology and provide recommendations. The Contractor shall analyze and evaluate data management, dissemination, and processing architectures for the various separate and collective optical sensors. The objective is to develop and demonstrate that the infrastructure is in place that will enable the sensor systems to meet overall test mission objectives and requirements. This will include addressing the post-mission data collection, conditioning, dissemination (including bandwidth, timelines, latency, etc.), display, processing, exploitation, storage archiving, and information delivery to the government selected sites and/or other appropriate organizations. The objective of this task is to ensure the overall capability of the integrated range operations to meet the data product requirements and informational needs of the Navy, as well as other service programs using the PMRF range/test facilities. Basic contract SOW paragraph 3.1.6 applies.
- 3.1.7 The Contractor shall provide data analysis of the target intercepts based on all electro-optical imagery ( Including all Air/Space/Ground/Ship/UAV sensors) and radar imagery (including Aegis SPY-1/COSIP/ROSA/AEGIS BSP) sensor data collected during the Aegis BMD FTM's, MDA-related, and customer requested mission testing. Data analysis will include optical/radar sensor fusion and correlation from multiple sources and Lethality/kill asesments. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment. Basic contract SOW paragraph 3.1.7 applies.
- 3.1.8 The Contractor shall provide technical support to NAVAIR WD Point Mugu, Aegis BMD Program Office, and PMRF for the stabilized high-accuracy optical tracking system (SHOTS) optics testing/optical instrumentation for test mission support. Basic contract SOW paragraph 3.1.8 applies.
- 3.1.9 The Contractor shall provide technical simulations, mission conduct, mission planning, post mission test data analyses, and technical oversight to the Multi-Frame Blind De-Convolution (MFBD) program at PMRF. The Contractor shall also develop Figures of Merit (FOM) to quantitatively assess image quality improvement. Basic contract SOW paragraph 3.1.6 applies.
- 3.1.10 The contractor shall provide technical support to Aegis BMD, PMRF, and MDA-related programs to design new sensor packages, including integration, for all land, sea, and air-based platforms. This includes performing studies resulting in the design or recommendations of new systems for collection assets such as UAV systems and sensors.. Basic contract SOW paragraph 3.1.8 applies.

- 3.1.11 The Contractor shall perform analysis of data collected of Resident Space Objects (RSOs) by Auxiliary Sensors during pre-mission rehearsals in support of Aegis BMD or MDA-related programs. Basic contract SOW paragraph 3.1.7 applies.
- 3.1.12 The contractor shall assist the government with experimental payloads or sensors on targets, interceptors and Airborne sensors including Cast Glance and UAV systems/sensors. Aegis BMD, MDA-related, or other customer requested tests provide research opportunities to perform experiments on a non-interference basis. An example might be attaching gas canisters to the target or new sensors on the target or interceptor. Data from these experiments may provide additional insight into missile fly out and intercept phenomenology at little cost to the program. The contractor shall assist with the development, planning, execution, and data analysis of such experiments. Basic contract SOW paragraph 3.1.1 applies.
- 3.1.13 The contractor shall perform data collection, post mission data analysis, sensor calibrations, and reporting of VIS NIR/SWIR, MWIR/LWIR imagery data to support launch, fly out, staging, intercept, and post intercept debris tracking for all AEGIS BMD FTM's. Data sources will include all optical ground based, Air based, Space based, ship based, including HALO I/II, WASP, Cast Glance, Predator UAV's, and other auxiliary sensors.. Basic contract SOW paragraph 3.1.7 applies.
- 3.1.14 The contractor shall provide technical lead support for PMRF optical working group. Basic contract SOW paragraph 3.1.8 applies.
- 3.1.15 The contractor shall provide optical systems engineering support including mission planning, mission conduct, government acceptance test planning, optical instrumentation specification, and technical requirements documentation development (TRD). Provide optical sensor simulator support for mission rehearsal and conduct. Basic contract SOW paragraph 3.1.15 applies.
- 3.1.16 The contractor shall research optical surveillance systems capabilities including ground/sea, airborne and space-based sensor systems. Basic contract SOW paragraph 3.1.1 applies.

## **3.2 Task Area B--Physics Analyses.**

- 3.2.1 The Contractor shall analyze all Government-furnished electro-optical data to assess the utility of optical and radar data for supporting Aegis BMD system evaluations, evaluate the requirements for various types of electro-optical and radar data, define a range of options for meeting the requirements, and provide recommendations, prioritized, of the options. The analyses shall include ground, mobile (ship-based, air-based), and space-based sensors and should consider both existing as well as potential systems. Advanced optical methods for sensing targets will be defined for future applications. Processing methods of hyper-spectral data and high frame rate data will be examined. Basic contract SOW paragraph 3.2.1 applies.
- 3.2.2 The Contractor shall review BMD test scenarios and ensure test requirements for all optical and radar systems provide for comprehensive optical and radar data collections. The Contractor shall provide recommendations on how to best achieve comprehensive optical and radar data collections. Waveband selection criteria will be developed by conducting a computational search using the end to end radiometric model to define the band location and bandwidth which maximizes observed signal to noise ratio at typical acquisition ranges. Basic contract SOW paragraph 3.2.2 applies.
- 3.2.3 The Contractor shall demonstrate that discrimination of the target cloud can be made with a combination of optical and radar data. The Contractor shall demonstrate the exploitation of optical data in the visible through LWIR regions. Optical signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment. Basic contract SOW paragraph 3.2.3 applies.

- 3.2.4 The Contractor shall analyze active optical methods and evaluate potential contributions of the laser radar tracking data to BMD testing. These methods shall include incoherent and coherent laser radars and phenomenological issues related to optical propagation through the atmosphere. Basic contract SOW paragraph 3.2.4 applies.
- 3.2.5 The Contractor shall demonstrate the exploitation multi and hyperspectral optical signatures. Spectral signatures before, during, and after impact will be exploited for hit determination, damage, and kill assessment. Basic contract SOW paragraph 3.2.5 applies.
- 3.2.6 The Contractor shall perform laser radar tracking studies for advanced electro-optical sensor detection applications. Provide laser systems engineering support for safety and future deployment requirements and capabilities. Basic contract SOW paragraph 3.2.6 applies.
- 3.2.7 The Contractor shall investigate concepts and instrumentation techniques associated with developing optical sky screen capability to support target launch range safety requirements at PMRF. Basic contract SOW paragraph 3.2.7 applies.
- 3.2.8 The Contractor shall investigate photo-optical instrumentation techniques for supporting and covering target launches. Basic contract SOW paragraph 3.2.8 applies.
- 3.2.9 The Contractor shall perform analysis to validate results of the KIDD algorithm. This is to help verify range safety work with respect to debris. Basic contract SOW paragraph 3.2.1 applies.

### **3.3 Task Area C--Test Plans, Test reports, and Procedures.**

- 3.3.1 The Contractor shall review mission scenarios and preliminary and final test plans/requirements and provide input and recommendations to meet Government test objectives. For scenarios the Contractor shall include a flow-down of test objectives to the scenario requirements, and detailed definition/planning of the test scenario including target type, presentation, trajectory and timing. The test plans/requirements shall address, as applicable, target presentations, characteristics of the required targets and their expected performance parameters, timing, engagement geometry, multiple targets, range safety issues. Coordination with all personnel associated with the test operations is also required including ship personnel, range personnel, and all personnel associated with supporting sensors, instrumentation requirements, data collection, target definition, preliminary and final mission firing plans, and test operations. This task will require establishing a technical interface with multiple activities so that there is a clear understanding at an operational level of the technical issues. This effort shall require coordination with organizations such as Missile Defense Agency, NAVSEASCOM Program Executive Office Integrated Warfare Systems (PEO IWS), PMRF, Aegis BMD Program, United States Army Space and Missile Defense Command (USASMDC), Air Force Space Systems Division, Air Force Maui Optical Station (AMOS)/ Maui Space Surveillance Site (MSSS); PMRF; SPAWAR, Naval Surface Warfare Center (NSWC) Corona, and other non-Navy organizations that are involved in the Navy T&E efforts. Basic contract SOW paragraph 3.3.1 applies.
- 3.3.2 The Contractor shall identify and recommend targets for testing to meet Government test objectives. The Contractor shall define target selection criteria and assessment of potential targets against those criteria. The selection criteria would include: (a) the degree to which candidate targets are good surrogates for the threat targets; (b) availability of launch platforms and ranges to support the target launches; (c) cost and schedule constraints; and (d) environmental considerations. The Contractor shall determine if T&E objectives can be met against targets of opportunity (TOOs) rather than dedicated targets. The Contractor shall identify potential TOOs (including Missile Defense Agency tests, operational missile tests, and space launches), and then correlate the sensor/test options associated with these targets against T&E objectives. Basic contract SOW paragraph 3.3.2 applies.

- 3.3.3 The Contractor shall define instrumentation requirements and data analysis products for BMD testing, and shall derive requirements for the data collection from all relevant sensors including: (a) telemetry from the targets and intercepting missiles; (b) tracking range radar support (independent of the AEGIS AN/SPY-1 radar); (c) photo-documentation sensors; (d) telescope sensors; and (e) ground-based and airborne, visible, Short Wave Infrared (SWIR), Mid-wave InfraRed (MWIR) and Long-wave InfraRed (LWIR) sensors. The Contractor shall identify existing tools for processing the data, identify any deficiencies, and correct these deficiencies by developing the necessary techniques to analyze the data. This process of identifying the final analysis products shall be incorporated into the test planning process. Mission test data from the AEGIS Weapons System shall also be included in the analyses. This will include collecting data necessary to support assessment of all aspects of system detection/control/engagements so that correlation can be made with data collected by electro-optical sensors and other telemetry (TM) and radar sources. This function also includes definition of collection requirements for range instrumentation and supporting sensors. The contractor shall assist with mission planning for land, sea, and air-based collection platforms. This includes reporting on viewing angles/limitations, illumination conditions, and other elements key to mission participation of sensors. The contractor shall identify data products required for post mission analyses in the DMAP (Data Management Analysis Plan prepared by NSWC Corona) that is prepared for each Aegis BMD mission. Basic contract SOW paragraph 3.3.3 applies.
- 3.3.4 The Contractor shall develop input for integrated test plans for utilizing ground, space, and mobile (air, sea) based optical sensor systems. Test plans will identify all test-planning procedures including pre-mission sensor testing, mission data collection, real-time data transmission, and post-mission data analysis. Test plans would also identify, among other things, specific data elements to be collected for data analysis, data products to be delivered, test limitations, communications, personnel, internal range readiness testing, simulations, target trajectory, and frequency management for data transmission. Basic contract SOW paragraph 3.3.4 applies.
- 3.3.5 The Contractor shall attend working group meetings as required for the Aegis BMD and THAAD programs including Instrumentation Working Groups (IWGs), Data Analysis Working Groups (DAWGs), Test and Evaluation Working Groups (TEWGs), Auxiliary Sensor Mission Readiness Reviews (ASMRRs) and other T&E planning meetings. Basic contract SOW paragraph 3.3.5 applies.
- 3.3.6 The Contractor shall develop input for Navy test and evaluation plans for evaluating the VTM's and the mobile optics capabilities of the SHOTS on the MATSS platform and at PMRF. Provide mission test conduct, test analysis support, government acceptance test planning, including data reduction analyses for both VTM's and SHOTS. Basic contract SOW paragraph 3.3.6 applies.
- 3.3.7 The contractor shall develop a master integrated test plan that combines under one document all of the auxiliary sensor test conduct requirements including test support positions (TSPs), communication frequencies, call signs, sensor requirements, test procedures, range safety factors, personnel required and POC's at PMRF, test schedules for the readiness test preps including the mission, timeline for mission conduct, data to be collected, and required reports for T+4 hrs, T+96 hrs, and T+ 30/60 days. Basic contract SOW paragraph 3.3.8 applies.
- 3.3.8 The contractor shall develop and produce auxiliary sensor quick books for each mission. The quick books will summarize all facets of the missions as they relate to auxiliary sensors. It will incorporate elements from IWG meetings, mission support plans, and other mission-related documents into a single booklet-style document. The document will be delivered primarily as hardcopies with a softcopy delivered on CD to the COR. Basic contract SOW paragraph 3.3.8 applies.
- 3.3.9 The contractor shall prepare post mission test reports, post mission briefings for T+ 72 hr data reviews, and post mission data analysis summaries of all Aegis BMD flight test missions. Basic contract SOW paragraph 3.3.1 applies.

#### **3.4 Task Area D--Test Data Collection Analysis and Test Data Review.**

- 3.4.1 The Contractor shall edit and correlate Infrared field and flight test data for repeatability and comparability, including processing and analyzing data from a diverse number of sources, AEGIS radar data, telemetry, range radar data, satellite data, sea-based, ground-, air-, and space-based optical and video data and shall analyze these data on a data analysis workstation to ensure that test objectives were met. The Contractor shall prepare test reports that compile analysis results and summarize findings. The Contractor shall provide the Government copies of the test reports and data packages in both hard copy and digital media. Basic contract SOW paragraph 3.4.1 applies.
- 3.4.2 The Contractor will support the analysis of specific issues related to electro-optics data collection and optics mount and sensor issues including mission requirements analysis for mount and sensor assignments on workstations in the PMRF DAC. Data will be ingested from multiple optical sensor sources for data reduction and analysis using the Tirade software. Basic contract SOW paragraph 3.4.2 applies.
- 3.4.3 The Contractor shall provide briefs and demonstrations of the workstations used to reduce optical data from Aegis BMD missions as required. Basic contract SOW paragraph 3.4.3 applies.
- 3.4.4 The Contractor shall support the software development for data reduction and analysis of all of the electro-optical sensor mission data sets to improve overall efficiency and accuracy of test data analysis. Basic contract SOW paragraph 3.4.4 applies.
- 3.4.5 The contractor shall support coordination with other optical sensor steering groups and committees, (CADR's) that involve comparison and data analysis of optical sensor results for Aegis BMD and flight test missions. Basic contract SOW paragraph 3.3.5 applies.

### **3.5 Task Area E--Test Monitoring and Real-Time Mission Support**

- 3.5.1 The Contractor shall attend test events to verify test requirements and procedures, monitor the test being conducted, and record test results/corrective actions as required. The Contractor shall report in real-time any observed problems and recommended corrective actions to the Government. Basic contract SOW paragraph 3.5.1 applies.
- 3.5.2 The Contractor shall assist in the development of an optical data analysis capability to support the reduction and analysis of optics data collected during test operations. Basic contract SOW paragraph 3.5.2 applies.
- 3.5.3 The Contractor shall provide real-time mission support for the collection of optics data. This effort shall include participation at the various optical mounts and sensor sites, as well as post-operation optics and radar data reduction, analysis and reporting. Also included in this effort is active support for calibration, operation, data collection, analysis and reporting associated with the various optical sensors (Vis, NIR, SWIR, MWIR) aboard the Cast Glance airborne observation platform and also the Predator/Reaper UAV systems sensors.. Basic contract SOW paragraph 3.5.3 applies.
- 3.5.4 The contractor shall provide support for test planning, test conduct, data reduction and analysis, and reporting of all electro-optical sensor and radar data collected during critical mission counter measures and other flight test missions. Basic contract SOW paragraph 3.5.4 applies.
- 3.5.5 Range Mission Tool (RMT) Support. The (RMT) is an event-planning and monitoring tool developed for the Pacific Missile Range Facility (PMRF) with the express capabilities to plan, rehearse, and monitor events taking place at PMRF, with a particular focus on Aegis Ballistic Missile Defense (Aegis BMD) events. The RMT is designed to plan an event, monitor changes from the plan as an exercise evolves, and provides real-time, interactive re-planning based on event objectives and constraints. This effort will provide engineering services for Optical Mission Planning support and direct mission support at the PMRF. All technical reports, trip reports, progress reports, and test reports in support of this particular

task will be delivered to the TA/government. The contractor will not be developing or writing any software. Basic contract SOW paragraph 3.5.4 applies.

3.5.5.1 Optical Mission Planning: Demonstrate that RMT is able to preplan/plan the scenarios for the event.

Verify Test Support Positions (TSP's) provided by the Participant Location Map (PLM) will provide the coverage required to meet the mission's test objectives.

3.5.5.2 RMT Event Support: Event support will take place at the PMRF. Support will include prior to the events the RMT will be used to plan the scenarios and load the GOG overlays containing the PLM data, hazard patterns and the trajectory data for the missiles being used during the event. RMT deficiencies during event support will be noted and reported. The Contractor shall provide a Trip Report after each mission event supported.

3.5.6 The contractor shall develop, procure, integrate, test, and assist with operation of new sensors (cameras, telescopes, radiometers, lenses, optical data processing software and processors, etc.) hosted on land, sea, and air platforms in support of Aegis BMD, and/or other government specified/requested missile defense-related missions. This includes documentation of various steps toward hosting new sensors (test plans, acceptance plans, calibration, etc) and the execution of said plans. Analysis of data collected during integration and post-mission will also be performed by the contractor. This may also include the creation of an optics lab at the contractor's site to aid in the development of new sensors. Basic contract SOW paragraph 3.5.4 applies.

3.5.7 The contractor shall provide real-time data analysis to support payload typing. Data will be provided by auxiliary sensors supporting missions. Basic contract SOW paragraph 3.5.4 applies.

3.5.8 The contractor shall provide Launch Area Photographic System (LAPS) development and support. Basic contract SOW paragraph 3.5.3 applies.

3.5.9 The contractor shall provide support for coordinating guest sensor requirements on PMRF VTM's and SHOTS on MATSS and at PMRF. Basic contract SOW paragraph 3.5.4 applies.

### **3.6 Task Area F--Program Management Support.**

3.6.1 The Contractor shall review and provide input for BMD program documents including but not limited to BMD Operational Requirements Document (ORD), the Test and Evaluation Master Plan (TEMP), the Aegis Ballistic Missile FTM test plan, including the Integrated Test Plan (ITP), the Program Introduction (PI), and the Operational Requirement (OR) and Operational Directive (OD) for correctness, completeness, and determine if the documents meet Government objectives. This documentation will include the production of draft documents for Government review related to more detailed test plans. Basic contract SOW paragraph 3.6.1 applies.

3.6.2 The Contractor shall support the development of and provide input to a Program Support Plan and Flight Mission Test Plans to assist in identifying and ensuring that sensors meet the scenario test objectives and mission requirements. This will encompass determining the best use of optics and sensors, as well as the capabilities of auxiliary sensors to include but not be limited to the Stabilized High Accuracy Optical System (SHOTS) at PMRF and on the Mobile Aerial Target Support Ship (MATSS), Air Force Maui Optical Station (AMOS), the High Altitude Observatory (HALO I and II), aircraft sensors, including the, optical sensors aboard the NP-3D Cast Glance aircraft, the wide-body airborne sensor platform (WASP), and National Means Sensors. Basic contract SOW paragraph 3.6.2 applies.

3.6.3 The contractor shall provide support for development of the PMRF long range, strategic optical requirements capabilities. Basic contract SOW paragraph 3.6.2 applies.

### **3.7 Task Area G--Management Reports and Briefing Preparations.**

- 3.7.1 The Contractor using government furnished information (GFI) shall develop presentation materials such as digital images, view-graphs, slides, video tapes, and printed media in the form of reports, instructions, and other materials as required by program management in the support of tasking identified in section 3 of this SOW. The media used shall be electronic or digital wherever practical and/or hard copy as required. Basic contract SOW paragraph 3.7.1 applies.
- 3.7.2 The Contractor shall prepare Monthly Activity and Status Reports to the Contracting Officer's Representative (COR) as specified in each TO. The format and content for the reports will be specified in each TO. The media used to convey the reports shall be electronic or digital wherever practical and/or hard copy as required. Basic contract SOW paragraph 3.7.2 applies.
- 3.7.3 The Contractor shall provide technical and engineering support at engineering reviews, T&E engineering planning and coordination meetings, T&E operational planning and coordination meetings at various locations relevant to the planning and conduct of BMD events. The contractor shall provide reviews and minutes of meetings attended. Basic contract SOW paragraph 3.7.3 applies.
- 3.7.4 The contractor shall provide summary movies for missions including data collected by and performance of auxiliary sensors. These may be created during pre-mission, mission, and post-mission periods as required by the government. Basic contract SOW paragraph 3.7.1 applies.

#### **4.0 DATA DELIVERABLES**

- 4.1 Specific items of reports, test plans, procedures, technical support documentation, presentation materials, meeting minutes, and progress reports will be provided in accordance with Form DD-1423.
- 4.1.1 Technical Reports, IR Seeker Performance Analysis, in accordance with paragraph 3.1.5 (CDRL A003).
- 4.1.2 Technical Reports, Test Scenario and Requirements Analysis, in accordance with paragraphs 3.2.2 and 3.3.1 (CDRL A003).
- 4.1.3 Technical Reports, Target Definition Analysis, in accordance with paragraph 3.3.2 (CDRL A003).
- 4.1.4 Technical Reports, Instrumentation Requirements and Data Analysis Products, in accordance with paragraph 3.3.3 (CDRL A003).
- 4.1.5 Technical Report, Optical Sensor Systems Utilization, in accordance with paragraph 3.3.4 (CDRL A003).
- 4.1.6 Minutes/Reviews of meetings, in accordance with paragraph 3.3.5 (CDRL A002).
- 4.1.7 Technical Report, Mobile Optics Capabilities, in accordance with paragraph 3.3.6 (CDRL A003).
- 4.1.8 Technical Report, Auxiliary Sensor Test Requirements, in accordance with paragraph 3.3.7 (CDRL A003).
- 4.1.9 Technical Report, Infrared Field and Flight Test Data Analysis, in accordance with paragraph 3.4.1 (CDRL A003).
- 4.1.10 Presentation Materials, Optical Data Reduction Workstations, in accordance with paragraph 3.4.3 (CDRL A001).
- 4.1.11 Minutes/Reviews of meetings, in accordance with paragraph 3.5.1 (CDRL A002).
- 4.1.12 Technical Reports, BMD Requirements Documents Analysis, in accordance with paragraph 3.6.1 (CDRL A003).

- 4.1.13 Technical Reports, Program Support Plan, in accordance with paragraph 3.6.2 (CDRL A003).
- 4.1.14 Technical Reports, Flight Mission Test Plan, in accordance with paragraph 3.6.2 (CDRL A003).
- 4.1.15 Presentation materials in accordance with paragraph 3.7.1 (CDRL A001).
- 4.1.16 Periodic Status Reports (monthly) in accordance with paragraph 3.7.2 (CDRL A004).
- 4.1.17 Minutes/reviews of meetings in accordance with paragraph 3.7.3 (CDRL A002).
- 4.1.18 Auxiliary sensor data analysis/summary movies in accordance with paragraph 3.7.3 (CDRL A001).
- 4.1.19 Auxiliary Sensor Mission Quick Books summarizing mission sensors, objectives, schedules, etc. in accordance with paragraph 3.3.8 (CDRL A001).
- 4.1.20 Technical Reports, Sensor design or recommendation studies for new sensors in accordance with paragraph 3.1.10 (CDRL A003).
- 4.1.21 Calibration procedures/reports in accordance with paragraph 3.5.3 (CDRL A003).
- 4.1.22 Technical Reports, Post-Mission reports for flight test or other requested missions in accordance with paragraph 3.5.3 (CDRL A003).
- 4.1.23 Technical Reports, Range Mission Tool (RMT) reports/progress reports/trip reports in accordance with paragraph 3.5.5 (CDRL A003).

## **5.0 SPECIAL CONSIDERATIONS.**

- 5.1 Security. The Contractor shall perform work up to the level of SECRET in the performance of this contract in accordance with applicable DD-254.
- 5.2 Government Facility Access.
  - 5.2.1 The Contractor will require access to Naval Base Ventura County (NBVC), restricted areas of the Industrial Areas at Point Mugu, CA, access to Marine Corps Base Hawaii Kanehe Bay (KBay), Hickham Air Force Base, HI, Pearl Harbor, HI and other bases utilized for air platform support.
  - 5.2.2 The Contractor will require access to Pacific Missile Range Facility (PMRF) at Barking Sands, Kauai, HI.
  - 5.2.3 The Contractor will require access to Maui Space Surveillance Site (MSSS) and Air Force Maui Optical Station (AMOS), Maui, HI.
  - 5.2.4 The Contractor will require access to White Sands Missile Range (WSMR), NM.
  - 5.2.5 After hours access may be required.
- 5.3 Government-Furnished Property. None.
- 5.4 Government-Furnished Data/Access.
  - 5.4.1 The Contractor will be provided access to the data itemized in paragraph 2.2.
  - 5.4.2 The Contractor will not be provided Government facilities workspace.

5.4.5 The Contractor will be sponsored for SIPRNET installation at the contractor's facility.

5.5 Travel.

5.5.1 All requests for travel will be submitted in writing to the Technical Assistant (TA) via the Contracting Officer's Representative (COR) for approval at least two (2) weeks prior to occurrence. Each travel request will include budgeted travel amount, projected cost for requested trip and balance remaining. Each travel request will itemize duration, airfare, and cost of lodging, per diem, car rental, miscellaneous and names of traveler(s). Travel in support of this task order is anticipated to be as follows:

TRIPS	PEOPLE	DAYS	FROM	TO
4	1	7	San Diego, CA	Huntsville, AL
2	6	2	San Diego, CA	Tucson, AZ
7	1	3	San Diego, CA	Naval Base Ventura County (NBVC), CA
1	1	1	San Diego, CA	Naval Base Ventura County (NBVC), CA
6	4	1	San Diego, CA	Pt Mugu, CA
1	1	5	San Diego, CA	Colorado Springs, CO
4	2	5	San Diego, CA	Washington, DC
6	1	5	San Diego, CA	Washington, DC
2	1	5	San Diego, CA	Moorestown, NJ
4	1	5	San Diego, CA	Kauai, HI
5	2	11	San Diego, CA	Kauai, HI
5	5	11	San Diego, CA	Kauai, HI
6	1	4	San Diego, CA	Maui, HI
2	1	10	San Diego, CA	Oahu, HI
2	1	3	San Diego, CA	Monterey, CA
6	1	5	San Diego, CA	Albuquerque, NM
6	1	11	San Diego, CA	Oahu, HI
12	1	3	San Diego, CA	Pt Mugu, CA
6	1	5	San Diego, CA	White Sands, NM
6	1	5	San Diego, CA	Cape Canaveral, FL
1	1	11	Kauai, HI	Boston, MA
1	1	11	Kauai, HI	Tullahoma, TN
2	1	7	Kauai, HI	Huntsville, AL
1	1	4	Kauai, HI	Los Angeles, CA
5	1	5	Kauai, HI	Washington, DC
6	1	2	Kauai, HI	Maui, HI
3	1	3	Kauai, HI	San Diego, CA
6	1	3	Kauai, HI	Oahu, HI
4	2	4	Maui, HI	Kauai, HI
4	2	5	Maui, HI	San Diego, CA

5.6 Training. None.

5.7 Materials/Supplies.

5.7.1 Small value materials and supplies may be required in the performance of this Contract.

5.7.2 Materials in support of electro-optical/surveillance sensors including photo-optical and command and control and communication systems instrumentation utilized to support testing, may be required in the performance of this contract.

**6.0 GOVERNMENT POINTS OF CONTACT.**

**Contracting Officer’s Representative (COR):**

Ex b(6)

NAVAIR WD Code 52100ME

Point Mugu, CA 93042-5049

Work: (805) Ex b(6)

FAX: (805) 989-8440

e-mail: Ex b(6)

**Technical Assistant (TA):**

Ex b(6)

NAVAIR WD Code 511300E

Point Mugu, CA 93042-5049

Work: (805) Ex b(6)

FAX: (805) 989-0585

Cell: (805) Ex b(6)

e-mail: Ex b(6)

7.0 Quality Assurance Surveillance Plan

Performance Standard (Expectations)	Acceptable Quality Level	Inspection Type and Frequency	Incentive or Remedy
Appropriate SOW tasking is performed without causing programmatic delay to the government. All products are submitted timely.	<b>Satisfactory:</b> Performance and deliverables meet the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Performance and deliverables result in moderate delay or impact to the program.	Each category will be evaluated every six (6) months and will be based upon government teammates’ evaluations conducted throughout the performance period. The overall performance rating will be assigned by the Task Order Manager (TOM) and subject to COR approval.	<b>Satisfactory:</b> 100% fee <b>Marginal:</b> 50% fee <b>Unsatisfactory:</b> 0% fee
Analysis methodology and deliverables are consistent, reflective of sound industry practices, and data deliverables are clear, concise, thorough and complete in accordance with (IAW) referenced CDRLs.	<b>Unsatisfactory:</b> Performance and deliverables result in unacceptable delay or impact to the program.		
Management and teaming allow seamless integration among government and contractor teammates. The contractor takes a proactive role in resolving issues. Issues identified by the government are addressed and resolved in a timely fashion.	<b>Satisfactory:</b> Performance meets the standard with few exceptions, which are easily corrected. <b>Marginal:</b> Performance leaves many questionable situations for government resolution. <b>Unsatisfactory:</b> Teaming is discordant and the contractor is not proactive.		

<p>Costs incurred and hours expended is commensurate with the services performed and products delivered, translating into value to the government. All funding and cost status reports are accurate and complete and submitted in accordance with contract requirements.</p>	<p><b>Satisfactory:</b> Contractor meets the standard with few exceptions, which are easily corrected.  <b>Marginal:</b> Contractor's expenditure of costs and hours are sometimes not appropriate for the performance and deliverables provided.  <b>Unsatisfactory:</b> Contractor's expenditure of costs and hours are not appropriate for the performance and deliverables provided.</p>		
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## Section E - Inspection and Acceptance

## INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government
000101	N/A	N/A	N/A	N/A
0002	Destination	Government	Destination	Government

## Section F - Deliveries or Performance

## DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	POP 06-SEP-2009 TO 05-SEP-2010	N/A	N/A FOB: Destination	
000101	N/A	N/A	N/A	N/A
0002	POP 06-SEP-2009 TO 05-SEP-2010	N/A	N/A FOB: Destination	

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930 NH2C 252 77777 0 050120 2F 000000

COST CODE: A00000261918

AMOUNT: \$545,000.00

CIN 130013370200001: \$545,000.00

## Section I - Contract Clauses

## CLAUSES INCORPORATED BY REFERENCE

52.232-22	Limitation Of Funds	APR 1984
52.244-2	Subcontracts	JUN 2007

**52.244-2 SUBCONTRACTS (JUN 2007)**

(a) Definitions. As used in this clause--

“Approved purchasing system” means a Contractor's purchasing system that has been reviewed and approved in accordance with Part 44 of the Federal Acquisition Regulation (FAR).

“Consent to subcontract” means the Contracting Officer's written consent for the Contractor to enter into a particular subcontract.

“Subcontract” means any contract, as defined in FAR Subpart 2.1, entered into by a subcontractor to furnish supplies or services for performance of the prime contract or a subcontract. It includes, but is not limited to, purchase orders, and changes and modifications to purchase orders.

(b) When this clause is included in a fixed-price type contract, consent to subcontract is required only on unpriced contract actions (including unpriced modifications or unpriced delivery orders), and only if required in accordance with paragraph (c) or (d) of this clause.

(c) If the Contractor does not have an approved purchasing system, consent to subcontract is required for any subcontract that--

(1) Is of the cost-reimbursement, time-and-materials, or labor- hour type; or

(2) Is fixed-price and exceeds--

(i) For a contract awarded by the Department of Defense, the Coast Guard, or the National Aeronautics and Space Administration, the greater of the simplified acquisition threshold or 5 percent of the total estimated cost of the contract; or

(ii) For a contract awarded by a civilian agency other than the Coast Guard and the National Aeronautics and Space Administration, either the simplified acquisition threshold or 5 percent of the total estimated cost of the contract.

(d) If the Contractor has an approved purchasing system, the Contractor nevertheless shall obtain the Contracting Officer's written consent before placing the following subcontracts:

(e)(1) The Contractor shall notify the Contracting Officer reasonably in advance of placing any subcontract or modification thereof for which consent is required under paragraph (b), (c), or (d) of this clause, including the following information:

(i) A description of the supplies or services to be subcontracted.

(ii) Identification of the type of subcontract to be used.

(iii) Identification of the proposed subcontractor.

(iv) The proposed subcontract price.

(v) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions.

(vi) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract.

(vii) A negotiation memorandum reflecting--

(A) The principal elements of the subcontract price negotiations;

(B) The most significant considerations controlling establishment of initial or revised prices;

(C) The reason cost or pricing data were or were not required;

(D) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;

(E) The extent to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contractor and the subcontractor; and the effect of any such defective data on the total price negotiated;

(F) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and

(G) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

(2) The Contractor is not required to notify the Contracting Officer in advance of entering into any subcontract for which consent is not required under paragraph (b), (c), or (d) of this clause.

(f) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--

(1) Of the acceptability of any subcontract terms or conditions;

(2) Of the allowability of any cost under this contract; or

(3) To relieve the Contractor of any responsibility for performing this contract.

(g) No subcontract or modification thereof placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type subcontracts shall not exceed the fee limitations in FAR 15.404-4(c)(4)(i).

(h) The Contractor shall give the Contracting Officer immediate written notice of any action or suit filed and prompt notice of any claim made against the Contractor by any subcontractor or vendor that, in the opinion of the Contractor, may result in litigation related in any way to this contract, with respect to which the Contractor may be entitled to reimbursement from the Government.

(i) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

(j) Paragraphs (c) and (e) of this clause do not apply to the following subcontracts, which were evaluated during negotiations:

Ex b(4)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   3	
2. AMENDMENT/MODIFICATION NO. 01	3. EFFECTIVE DATE 17-Sep-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVM CODE 254200D ATTN: D. GEARY (760) 939-2654 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0005	
			X	10B. DATED (SEE ITEM 13) 06-Sep-2009	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22, Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: gearyd093050 See Herein.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 17-Sep-2009	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000102 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000102	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300135728	UNDEFINED		UNDEFINED	\$0.00
				MAX COST	\$0.00
				FIXED FEE	\$0.00
				<hr/>	\$0.00
				TOTAL MAX COST + FEE	\$0.00
	ACRN AB CIN: 130013572800001				\$220,000.00

SECTION E - INSPECTION AND ACCEPTANCE

The following Acceptance/Inspection Schedule was added for SUBCLIN 000102:

INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
N/A	N/A	N/A	N/A

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$220,000.00 from \$545,000.00 to \$765,000.00.

SUBCLIN 000102:

Funding on SUBCLIN 000102 is initiated as follows:

ACRN: AB

CIN: 130013572800001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$220,000.00

Total: \$220,000.00

Cost Code: A00000287450

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   4	
2. AMENDMENT/MODIFICATION NO. 02	3. EFFECTIVE DATE 08-Oct-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVM CODE 254200D ATTN: D. GEARY (760) 939-2654 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0005	
			X	10B. DATED (SEE ITEM 13) 06-Sep-2009	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22. Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: gearyd1027 See herein.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16C. DATE SIGNED	
_____ (Signature of person authorized to sign)		16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)		08-Oct-2009	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

## SUMMARY OF CHANGES

## SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000103 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000103		UNDEFINED		UNDEFINED	\$0.00
	For Navy Accounting Purposes Only				
	CPFF				
	FOB: Destination				
	PURCHASE REQUEST NUMBER: 1300136625				
				MAX COST	UNDEFINED
				FIXED FEE	UNDEFINED
				TOTAL MAX COST + FEE	\$0.00
	ACRN AC				\$75,000.00
	CIN: 130013662500001				

SUBCLIN 000104 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000104		UNDEFINED		UNDEFINED	\$0.00
	For Navy Accounting Purposes Only				
	CPFF				
	FOB: Destination				
	PURCHASE REQUEST NUMBER: 1300136592				
				MAX COST	UNDEFINED
				FIXED FEE	UNDEFINED
				TOTAL MAX COST + FEE	\$0.00
	ACRN AD				\$80,000.00
	CIN: 130013659200001				

SUBCLIN 000105 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000105	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300136653	UNDEFINED		UNDEFINED	\$0.00
				MAX COST	UNDEFINED
				FIXED FEE	UNDEFINED
				TOTAL MAX COST + FEE	\$0.00
	ACRN AE CIN: 130013665300001				\$65,000.00

SECTION E - INSPECTION AND ACCEPTANCE

The following Acceptance/Inspection Schedule was added for SUBCLIN 000103:

INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
N/A	N/A	N/A	N/A

The following Acceptance/Inspection Schedule was added for SUBCLIN 000104:

INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
N/A	N/A	N/A	N/A

The following Acceptance/Inspection Schedule was added for SUBCLIN 000105:

INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
N/A	N/A	N/A	N/A

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$220,000.00 from \$765,000.00 to \$985,000.00.

SUBCLIN 000103:

Funding on SUBCLIN 000103 is initiated as follows:

ACRN: AC

CIN: 130013662500001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$75,000.00

Total: \$75,000.00

Cost Code: A00000298737

SUBCLIN 000104:

Funding on SUBCLIN 000104 is initiated as follows:

ACRN: AD

CIN: 130013659200001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$80,000.00

Total: \$80,000.00

Cost Code: A00000298423

SUBCLIN 000105:

Funding on SUBCLIN 000105 is initiated as follows:

ACRN: AE

CIN: 130013665300001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$65,000.00

Total: \$65,000.00

Cost Code: A00000299094

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   3	
2. AMENDMENT/MODIFICATION NO. 03	3. EFFECTIVE DATE 17-Dec-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVM CODE 254200D ATTN: D. GEARY (760) 939-2654 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0005	
			X	10B. DATED (SEE ITEM 13) 06-Sep-2009	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22. Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: gearyd10544 See Herein.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i> (Signature of Contracting Officer)	16C. DATE SIGNED 17-Dec-2009	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000106 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000106	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300141900	UNDEFINED		UNDEFINED	\$0.00
				MAX COST	\$0.00
				FIXED FEE	\$0.00
				<b>TOTAL MAX COST + FEE</b>	<b>\$0.00</b>
	ACRN AF CIN: 130014190000001				\$18,000.00

SUBCLIN 000107 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000107	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300142797	UNDEFINED		UNDEFINED	\$0.00
				MAX COST	\$0.00
				FIXED FEE	\$0.00
				<b>TOTAL MAX COST + FEE</b>	<b>\$0.00</b>
	ACRN AG CIN: 130014279700001				\$36,000.00

SECTION E - INSPECTION AND ACCEPTANCE

The following Acceptance/Inspection Schedule was added for SUBCLIN 000106:

INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
N/A	N/A	N/A	N/A

The following Acceptance/Inspection Schedule was added for SUBCLIN 000107:

INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
N/A	N/A	N/A	N/A

## SECTION G - CONTRACT ADMINISTRATION DATA

### Accounting and Appropriation

#### Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$54,000.00 from \$985,000.00 to \$1,039,000.00.

#### SUBCLIN 000106:

Funding on SUBCLIN 000106 is initiated as follows:

ACRN: AF

CIN: 130014190000001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$18,000.00

Total: \$18,000.00

Cost Code: A00000341583

#### SUBCLIN 000107:

Funding on SUBCLIN 000107 is initiated as follows:

ACRN: AG

CIN: 130014279700001

Acctng Data: 97X4930 NH2C 252 77777 0 050120 2F 000000

Increase: \$36,000.00

Total: \$36,000.00

Cost Code: A00000347232

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1   3	
2. AMENDMENT/MODIFICATION NO. 04	3. EFFECTIVE DATE 07-Jan-2010	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY CDR NAWCVM CODE 254200D ATTN: D. GEARY (760) 939-2654 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108	CODE N68936	7. ADMINISTERED BY (If other than item 6) DCMA SAN DIEGO 7675 DAGGET STREET SUITE 200 SAN DIEGO CA 92111-2241		CODE S0514A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) PHOTON RESEARCH ASSOCIATES, INC. WM. JERRY GRIFFITH 9985 PACIFIC HEIGHTS BLVD STE 200 SAN DIEGO CA 92121-1723			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. N68936-04-D-0026-0005	
			X	10B. DATED (SEE ITEM 13) 06-Sep-2009	
CODE 7N694	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) <b>See Schedule</b>					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral IAW FAR Clause 52.232-22. Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: gearyd10649 See herein.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) MARY K. JACOBS / PROCURING CONTRACTING OFFICER TEL: (760) 939-6043 EMAIL: mary.jacobs@navy.mil		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Mary Jacobs</i>		16C. DATE SIGNED 07-Jan-2010	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000108 is added as follows:

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
000108	For Navy Accounting Purposes Only CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300143814	UNDEFINED		UNDEFINED	\$0.00
				MAX COST	\$0.00
				FIXED FEE	\$0.00
				<hr/>	\$0.00
				TOTAL MAX COST + FEE	\$0.00
	ACRN AH CIN: 130014381400001				\$192,000.00

SECTION E - INSPECTION AND ACCEPTANCE

The following Acceptance/Inspection Schedule was added for SUBCLIN 000108:

INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
N/A	N/A	N/A	N/A

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$192,000.00 from \$1,039,000.00 to \$1,231,000.00.

SUBCLIN 000108:

Funding on SUBCLIN 000108 is initiated as follows:

ACRN: AH

CIN: 130014381400001

Acctng Data: 1701804 70CA 251 00070 M 045924 2D X3R131

Increase: \$192,000.00

Total: \$192,000.00

Cost Code: 0534A0MD99QQ

(End of Summary of Changes)