

2. AMENDMENT/MODIFICATION NO. 46	3. EFFECTIVE DATE 08-Jul-2019	4. REQUISITION/PURCHASE REQ. NO. 1300798590	5. PROJECT NO. (If applicable) N/A
6. ISSUED BY CODE	N00167	7. ADMINISTERED BY (If other than Item 6) CODE	S2404A

NSWC, CARDEROCK DIVISION, MARYLAND  
9500 MacArthur Blvd  
West Bethesda MD 20817

DCMA Manassas  
14501 George Carter Way, 2nd Floor  
Chantilly VA 20151

SCD: C

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and Zip Code) CACI, Inc.-Federal 14370 Newbrook Drive Chantilly VA 20151		9A. AMENDMENT OF SOLICITATION NO.  9B. DATED (SEE ITEM 11)
	[X]	10A. MODIFICATION OF CONTRACT/ORDER NO. N00178-04-D-4030-FD11 10B. DATED (SEE ITEM 13) 24-Sep-2015
CAGE CODE 1QU78	FACILITY CODE	

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not extended.  
 Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:  
 (a) By completing Items 8 and 15, and returning one (1) copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

SEE SECTION G

**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.
<input type="checkbox"/>	
<input type="checkbox"/>	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).
<input checked="" type="checkbox"/>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Bilateral in accordance with FAR 43.103(a)(3) Mutual Agreement of Parties
<input type="checkbox"/>	D. OTHER (Specify type of modification and authority)

**E. IMPORTANT:** Contractor  is not,  is required to sign this document and return 1 copies to the issuing office.

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

SEE PAGE 2

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED
(Signature of person authorized to sign)	16B. UNITED STATES OF AMERICA  BY _____ (Signature of Contracting Officer)
	16C. DATE SIGNED

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## GENERAL INFORMATION

The purpose of this modification is to de-obligate unused funding. As a result, funding is decreased on Labor SLINs 7002AK by \$4,600.00 7201AL by \$10,600 and 7201AM by \$12,100 and ODC SLINs 79002AD by \$500 and 9201AE by \$14,500. Total de-obligation amount is \$42,300.00. Additionally, this modification provides acknowledgement of CSRA LLC's name change to CACI. Accordingly, said Task Order (TO) is modified as follows:

### A. Section B changes:

- The following CLINs/SLINs have been revised as follows:

CLIN/SLIN	From (\$)	By (\$)	To (\$)
7000			
7201AK			
7201AL			
7201AM			
9000			
9201AD			
9201AE			

### B. Section G changes:

- The total amount of funds obligated to the task is hereby decreased from \$19,572,636.87 by \$42,300 to \$19,530,336.87.

CLIN/SLIN	From (\$)	By (\$)	To (\$)
7201AK			
7201AL			
7201AM			
9201AD			
9201AE			

- Accounting Data is revised to incorporate Mod 46 changes as follows:

MOD 46

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MOD 46 Funding -42300.00  
Cumulative Funding 19530336.87

C. Additional Contract Change:

1. NSWCCD provides acknowledgement of CSRA name change to CACI, Cage Code, DUNS, Address and Mod P00039 administered by Office under Reference DCMA Novation Modification ARZ997 effective 5/10/2019. Filed in contract attachments.

D. The total value of the order remains unchanged at \$26,896,940.63.

E. The end of the period of performance remains unchanged at 23 September 2019.

F. All other task order terms and conditions shall remain the same.

A conformed copy of this Task Order is attached to this modification for informational purposes only.

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## SECTION B SUPPLIES OR SERVICES AND PRICES

CLIN - SUPPLIES OR SERVICES

For Cost Type Items:

Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
7000	R425	Engineering Services in accordance with Section C entitled 'Statement of Work' Base Year 1. CLIN 7000 is a holding CLIN and the ceiling will be reduced by the amount of ceiling applied to separate CLINs to maintain the proper task order value. (Fund Type - TBD)	LH			\$2,064,857.77
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
7001	R425	Code 80 Engineering Services in accordance with Section C entitled 'Statement of Work' Base Year 1. (Fund Type - OTHER)	LH			\$1,659,257.58
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
700101	R425	Incremental funding for TI 01 in the amount of \$50,000.00 (RDT&E)				
700102	R425	Incremental funding for TI 003 in the amount of \$150,000.00. (Fund Type - OTHER)				
700104	R425	Incremental funding for TI 006 in the amount of \$220,000.00. (RDT&E)				
700105	R425	Incremental funding for TI 004 in the amount of \$500,000.00. Mod29 deobligated -\$54,742.24 per TI-004A. (RDT&E)				
700106	R425	Incremental funding for TI 005 in the amount of \$112,000.00. (RDT&E)				
700107	R425	Funds in the amount of \$50,000 for TI-10 (O&M,N) (O&MN,N)				
700108	R425	Funds in the amount of \$25,000 for TI-10 (O&M,N) (O&MN,N)				
700109	R425	Funding for TI 015 in the amount of \$130,000.00. (Fund Type - OTHER)				
700110	R425	Funding for TI 019 in the amount of \$357,000.00. (Fund Type - OTHER)				
700111	R425	Funds in the amount of \$50,000 for TI-10 Rev 1 (O&M,N) (O&MN,N)				
700112	R425	Funds in the amount of \$50,000 for TI-10 Rev 2				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
		(O&M,N) (O&MN,N)				
700113	R425	Funding for TI 026 in the amount of \$20,000.00. (Fund Type - OTHER)				
7002	R425	PMS 450 - Engineering Services in accordance with Section C entitled 'Statement of Work' Base Year 1. (Fund Type - TBD)	LH		\$264,000.00	
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
700201	R425	Incremental Funding for TI 02 in the amount of \$81,000.00. 2410(a) is hereby invoked. (O&MN,N)				
700202	R425	Incremental funding for TI 02 in the amount of \$16,000.00. 2410(a) is hereby invoked. (O&MN,N)				
700203	R425	Funding for TI 017 in the amount of \$97,000.00. (SCN)				
700204	R425	Funding for TI 014 in the amount of \$20,000.00. (RDT&E)				
700205	R425	Funding for TI 023 in the amount of \$50,000.00. (SCN)	LH		\$1,507,599.00	
7003	R425	PMS 397 - Engineering Services in accordance with				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
		Section C entitled 'Statement of Work' Base Year 1. (RDT&E)				
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
700301	R425	Funding for TI 007 in the amount of \$60,000.00. (RDT&E)				
700302	R425	Funding for TI 008 in the amount of \$775,200.00 (RDT&E)				
700303	R425	Funding for TI 009 in the amount of \$168,000.00. (RDT&E)				
700304	R425	Funding for TI 011 in the amount of \$158,000.00. (RDT&E)				
700305	R425	Funding for TI 012 in the amount of \$326,000.00. (RDT&E)				
700306	R425	Funding for TI 020 in the amount of \$32,000.00. Mod 09 decreases the funding by \$11,601 to \$20,399. (RDT&E)	LH			\$687,000.00
7004	R425	Code 10 - Engineering Services in accordance with Section C entitled 'Statement of Work' Base Year 1 (Fund Type - TBD)				
		Max Fee				
		Min Fee				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
		Government Overrun Share Line				
		Government Underrun Share Line				
700401	R425	Funds in the amount of \$687,000 for TI-13 (SCC) (Fund Type - OTHER)				
7005	R425	PMS 392 - Engineering Services in accordance with Section C entitled 'Statement of Work' Base Year 1. (OPN)	LH		\$60,000.00	
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
700501	R425	Funding for TI 016 in the amount of \$60,000.00. (OPN)				
7006	R425	PMS 394 - Engineering Services in accordance with Section C entitled 'Statement of Work' Base Year 1. (RDT&E)	LH		\$46,000.00	
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				



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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
700601	R425	Funding in the amount of \$46,000.00 for TI 018. (RDT&E)				
7007	R425	PMS 391-Engineering Services in accordance with Section C entitled 'Statement of Work' Base Year 1. (Fund Type - TBD)	LH			\$30,000.00
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
700701	R425	Funding in the amount of \$30,000.00 for TI-022. (O&MN,N)	LH			\$92,000.00
7008	R425	NAVAIR PMA 261 - Engineering Services in accordance with Section C entitled 'Statement of Work' Base Year 1 (APN)				
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
700801	R425	Funds in the amount of \$150,000 for TI-021. Mod 09 decreases the funding by \$58,000 to \$92,000. (APN)				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
7100	R425	Engineering Services in accordance with Section C entitled 'Statement of Work' Exercised Option Year 1. CLIN 7100 is a holding CLIN and the ceiling will be reduced by the amount of ceiling applied to separate CLINs to maintain the proper task order value. (Fund Type - TBD)	LH			\$2,285,110.46
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
7101	R425	Code 80 - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (Fund Type - TBD)	LH			\$825,497.33
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
710101	R425	Funding for TI-029. (WCF)				
710102	R425	Funds for TI-38 RevB. (Fund Type - OTHER)				
710103	R425	Funding in the amount of				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
		\$140,000 for TI-039. (Fund Type - OTHER)				
710104	R425	Funding in the amount of \$75,000 for TI-042. (Fund Type - OTHER)				
7102	R425	SEA 07TR - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (OPN)	LH		\$72,544.60	
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
710201	R425	Funding in the amount of \$182,000 for TI-025. Mod 25 reduces SLIN by \$109,455.40 for a balance of \$72,544.60. (OPN)				
7103	R425	ONR - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (Fund Type - TBD)	LH		\$20,000.00	
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
710301	R425	Funding in the amount of \$20,000				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
		for TI-030. (RDT&E)				
7104	R425	PMS450 - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (Fund Type - TBD)	LH		\$95,000.00	
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
710401	R425	Funds in the amount of \$95,000 for TI-033. Increased from \$55,000 by \$40,000 on mod 14 under TI-33 Rev A. (SCN)	LH		\$1,901,403.00	
7105	R425	PMS397 - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (Fund Type - TBD)				
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
710501	R425	Funds in the amount of \$40,000 for TI-034. (RDT&E)				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
710502	R425	Funds in the amount of \$237,000 for TI-035. (RDT&E)				
710503	R425	Funds in the amount of \$50,000 for TI-036. (RDT&E)				
710504	R425	Funds in the amount of \$45,433 for TI-037. (RDT&E)				
710505	R425	Funds in the amount of \$18,000 for TI-032. (RDT&E)				
710506	R425	Funds in the amount of \$846,300 for TI-035B. (RDT&E)				
710507	R425	Funds in the amount of \$100,000 for TI-036A. (RDT&E)				
710508	R425	Funds in the amount of \$89,900 for TI-037A. (RDT&E)				
710509	R425	Funds increased from \$158,270 by \$32,000 to \$190,270 on mod 20 under TI-37 Rev C. (RDT&E)				
710510	R425	Funds in the amount of \$140,000 for TI-041.Mod29 deobligated -\$8,500 per TI-041A. (RDT&E)				
710511	R425	Funds in the amount of \$80,000 for TI-032A. Mod 30 deobligated \$5,000 per TI-032B. (RDT&E)				
710512	R425	Funds in the amount of \$78,000 for TI-036RevB. (RDT&E)				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
7106	R425	ARMY HPC - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (Fund Type - TBD)	LH			\$519,123.22
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
710601	R425	Funding in the amount of \$36,000 for TI-028. (RDT&E)				
710602	R425	Funding in the amount of \$75,000 for TI-027. (RDT&E)				
710603	R425	Funding in the amount of \$70,000 for TI-043. (RDT&E)				
710604	R425	Funds increased from \$100,000 by \$45,000 to \$145,000 on mod 18 under TI-045 Rev A. Mod 25 reduces SLIN by \$14,468.77 for a balance of \$130,531.23. (RDT&E)				
710605	R425	Funding in the amount of \$100,000 for TI-046. Mod 25 reduces SLIN by \$1,938.59 for a balance of \$98,061.41 (RDT&E)				
710606	R425	Funding in the amount of \$125,000 for				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
		TI-047. Mod 25 reduces SLIN by \$15,469.42 for a balance of \$109,530.58 (RDT&E)				
7107	R425	NAVAIR PMA 261 - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (Fund Type - TBD)	LH		\$283,000.00	
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
710701	R425	Funding in the amount of \$58,000 for TI-031. (APN)				
710702	R425	Funding in the amount of \$225,000 for TI-40. (APN)				
7108	R425	PMS 391 - Engineering Services in accordance with Section C entitled 'Statement of Work'Option Year 1. (Fund Type - TBD)	LH		\$7,899.72	
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
710801	R425	TI-044 and subsequent				

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Item	PSC	Supplies/Services Qty	Unit	Target Cost	Target Fee	CPIF
		revisions. (OPN)				
7109	R425	PMS 392 - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (Fund Type - TBD)	LH			\$314,771.00
		Max Fee				
		Min Fee				
		Government Overrun Share Line				
		Government Underrun Share Line				
710901	R425	Funding in the amount of \$100,000 for TI-048. (OPN)				
710902	R425	Funding in the amount of \$60,000 for TI-049. (O&MN,N)				
710903	R425	Funding in the amount of \$100,000 for TI-56. (OPN)				
710904	R425	Funding in the amount of \$40,000 for TI-57. (O&MN,N)				
710905	R425	Funding in the amount of \$40,000 for TI-57. (O&MN,N)				
7110	R425	PMS 340 - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (RDT&E)	LH			\$55,672.00
		Max Fee				
		Min Fee				



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Item	PSC	Supplies/Services	Qty	Unit	Target Cost	Target Fee	CPIF
		Government Overrun Share Line					
		Government Underrun Share Line					
711001	R425	Funding in the amount of \$55,672 for TI-050. (RDT&E)					
				LH			\$1,170.05
7111	R425	PMS 399 - Engineering Services in accordance with Section C entitled 'Statement of Work' Option Year 1. (O&MN,N)					
		Max Fee					
		Min Fee					
		Government Overrun Share Line					
		Government Underrun Share Line					
711101	R425	Funding in the amount of \$27,000 for TI-051. 2410(a) is invoked. Mod 27 reduces SLIN by \$25,829.95 for a balance of \$1,170.05. (O&MN,N)					

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
7200	R425	OPTION 2 - Engineering Services in accordance with Section C entitled 'Statement of Work'. Note: CLIN 7200 is a holding CLIN and is provided for informational and tracking purposes only. (Fund Type - TBD)		LH			\$1,358,623.04
7201		Option Period 2 (Exercised) Direct Labor					\$5,049,810.76

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
7201AA	R425	TI-52 - 2410(a) will be invoked (O&MN,N)		LH			\$693,000.00
7201AB	R425	TI-54 (RDT&E)		LH			\$40,000.00
7201AC	R425	TI-60 (WCF)		LH			\$140,000.00
7201AD	R425	TI-61 - 2410(a) will be invoked (RDT&E)		LH			\$120,000.00
7201AE	R425	TI-62 (RDT&E)		LH			\$200,000.00
7201AF	R425	TI-63 (OPN)		LH			\$25,000.00
7201AG	R425	TI-55A, 'Plus Up' under TI-55A raises SCLIN from \$495,000 by \$440,000 for a balance of 935,000. De-obligated under IT-55B, reduce the SCLIN by \$89,767 for a new total of \$845,233 (Fund Type - OTHER)		LH			\$845,233.00
7201AH	R425	TI-58A (RDT&E)		LH			\$254,000.00
7201AJ	R425	TI-59 (RDT&E)		LH			\$124,010.00
7201AK	R425	TI-59/TI-59D De-obligation of \$4,600 new total \$61,900. (RDT&E)		LH			\$61,900.00
7201AL	R425	TI-59A, 'Plus Up' under TI-59B from \$742,500 by \$282,000 for a balance of 1,024,500. 'Plus Up' under TI-59C raises by \$290,000 from \$1,024,500 for a balance of 1,314,500. DE-OB under TI-59D by \$10,600 from 1,314,500 for a balance of \$1,303,900. (RDT&E)		LH			\$1,303,900.00
7201AM	R425	TI-59A; DE-OB under TI-59D by \$12,100 from \$75,000 for a total of \$62,900. (RDT&E)		LH			\$62,900.00
7201AN	R425	TI-64/64A (OPN)		LH			\$15,268.76
7201AP	R425	TI-65A, 'Plus Up' under TI-65A raises CLIN from \$348,000 by \$20,000 for a balance of 368,000. TI-65B de-obligated \$20,200 for a new total of \$347,800. (RDT&E)		LH			\$347,800.00
7201AQ	R425	TI-66 (SCN)		LH			\$93,000.00
7201AR	R425	TI-67 (APN)		LH			\$150,000.00
7201AS	R425	TI-68 (RDT&E)		LH			\$22,796.00
7201AT	R425	TI-69; De-obligated under TI-69C, reduce the SCLIN by \$71,747.00 (976 hours) for a		LH			\$75,253.00

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
		new total of \$75,235(1,024 Hours). (RDT&E)					
7201AU	R425	TI-63A (OPN)		LH			\$48,000.00
7201AV	R425	TI-70/70A (RDT&E)		LH			\$221,000.00
7201AW	R425	TI-53 (WCF)		LH			\$44,250.00
7201AX	R425	TI-61A - 2410(a) will be invoked (RDT&E)		LH			\$35,000.00
7201AY	R425	TI-72/72A (RDT&E)		LH			\$0.00
7201AZ	R425	TI-61B (RDT&E)		LH			\$52,500.00
7201BA	R425	TI-68A (RDT&E)		LH			\$10,000.00
7201BB	R425	TI-52B (O&MN,N)		LH			\$45,000.00
7201BC	R425	TI-69A, De-obligation under TI-69B decreases CLIN from \$40,000.00 by \$40,000.00 for a balance of \$0.00. (RDT&E)		LH			\$0.00
7201BD	R425	TI-60A (Fund Type - OTHER)		LH			\$20,000.00

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Base Fee	Award Fee	CPAF
7300	R425	OPTION 3 - Engineering Services in accordance with Section C entitled 'Statement of Work'. Note: CLIN 7300 is a holding CLIN and is provided for informational and tracking purposes only. (Fund Type - TBD)		LH				\$719,962.22

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
7301		Option Period 3 (Exercised) Direct Labor					\$5,727,849.00
7301AB	R425	TI-75 (OPN)		LH			\$91,542.00
7301AC	R425	TI-76 - 2410(a) will be invoked (RDT&E)		LH			\$107,500.00
7301AD	R425	TI-77 (RDT&E)		LH			\$300,000.00
7301AE	R425	TI-78/TI-78A (OH) PLUS UP (Fund Type - OTHER)		LH			\$770,000.00
7301AF	R425	TI-79 (WCF)		LH			\$203,000.00
7301AG	R425	TI-81 - 2410(a) will be invoked. (O&MN,N)		LH			\$11,000.00

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
7301AH	R425	TI-82/TI-82A PLUS UP (OPN)		LH			\$83,800.00
7301AJ	R425	TI-83 (RDT&E)		LH			\$74,000.00
7301AK	R425	TI-84 (RDT&E)		LH			\$96,000.00
7301AL	R425	TI-85 (RDT&E)		LH			\$286,780.00
7301AM	R425	TI-86 (RDT&E)		LH			\$25,000.00
7301AN	R425	TI-74 (RDT&E)		LH			\$75,500.00
7301AP	R425	TI-73; 2410 (A) Authority to be invoked. (O&MN,N)		LH			\$346,400.00
7301AQ	R425	TI-71 (O&MN,N)		LH			\$297,900.00
7301AR	R425	TI-80 (RDT&E)		LH			\$40,000.00
7301AS	R425	TI-87 (RDT&E)		LH			\$60,000.00
7301AT	R425	TI-91 (SCN)		LH			\$142,500.00
7301AU	R425	TI-085A FY19 NEW LOA, INCREMENATAL FUNDING (RDT&E)		LH			\$190,650.00
7301AV	R425	TI-088 FY 19 NEW LOA, INCREMENTAL FUNDING - SERVICE COST CENTER (SCC). (Fund Type - OTHER)		LH			\$128,000.00
7301AW	R425	TI-84A (RDT&E) FY19 Funding (RDT&E)		LH			\$263,000.00
7301AX	R425	TI-93 (SCN)		LH			\$119,000.00
7301AY	R425	TI-94 (RDT&E)		LH			\$238,750.00
7301AZ	R425	TI-95 (RDT&E)		LH			\$140,000.00
7301BA	R425	TI-96 (O&MN,N)		LH			\$254,611.00
7301BB	R425	TI-97 PM5450C (SCN)		LH			\$163,000.00
7301BC	R425	TI-97 PMS450F TASK (SCN)		LH			\$270,996.00
7301BD	R425	TI-89/89A; Under TI-89A increased funding by \$90,000 ( ) for new total of \$150,000 (.). (RDT&E)		LH			\$150,000.00
7301BE	R425	TI-92 (RDT&E) (RDT&E)		LH			\$47,500.00
7301BF	R425	TI-98 (Fund Type - OTHER)		LH			\$50,000.00
7301BG	R425	TI-90 (OMN) (O&MN,N)		LH			\$197,420.00
7301BH	R425	TI-100 (RDT&E)		LH			\$190,000.00
7301BJ	R425	TI-102 (Fund Type - OTHER)		LH			\$151,000.00
7301BK	R425	TI-103 (RDT&E)		LH			\$8,000.00
7301BL	R425	TI-101 (RDT&E) (RDT&E)		LH			\$155,000.00

Item	PSC	Supplies/Services	Qty	Unit	Target Cost	Target Fee	CPIF
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Item	PSC	Supplies/Services	Qty	Unit	Target Cost	Target Fee	CPIF
7400	R425	Engineering Services in accordance with Section C entitled 'Statement of Work' Award Term Year 2. CLIN 7400 is a holding CLIN and the ceiling will be reduced by the amount of ceiling applied to separate CLINs to maintain the proper task order value. (Fund Type - TBD)		LH			\$6,513,454.80
		Option					
		Max Fee					
		Min Fee					
		Government Overrun					
		Share Line					
		Government Underrun					
		Share Line					

For ODC Items:

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost
9000	R425	SEA 07TR - Option Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7000 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. CLIN 9000 is a holding CLIN and the ceiling will be reduced by the amount of ceiling applied to separate CLINs to maintain the proper task order value. (Fund Type - TBD)			
9001	R425	PMS 450 - Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7000 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (Fund Type - TBD)			
900101	R425	Incremental funding for TI 02 in the amount of \$3,000.00. 2410(a) is hereby invoked. (O&MN,N)			
900102	R425	Funding for TI 017 in the amount of \$3,000.00. (SCN)			
900103	R425	Funding for TI 014 in the amount of \$5,000.00. (RDT&E)			
9002	R425	PMS 397 - Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7000 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (RDT&E)			
900201	R425	Incremental funding for TI 008 in the amount of \$19,800.00. (RDT&E)			
900202	R425	Incremental funding for TI 009 in the amount of \$7,000.00 (RDT&E)			

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Item	PSC	Supplies/Services	Qty	Unit	Est.	Cost
900203	R425	Incremental funding for TI 011 in the amount of \$7,000.00. (RDT&E)				
900204	R425	Incremental funding for TI 012 in the amount of \$3,000.00. (RDT&E)				
900205	R425	Incremental funding for TI 020 in the amount of \$8,000.00. Mod 09 decreases the funding by \$4,500 to \$3,500. (RDT&E)				
9003	R425	PMS 392 - Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7000 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (Fund Type - TBD)				
900301	R425	Funding for TI 016 in the amount of \$2,000.00. (OPN)				
9004	R425	Code 80 - Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7000 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (Fund Type - OTHER)				
900401	R425	Incremental funding for TI 019 in the amount of \$3,000. (Fund Type - OTHER)				
9005	R425	PMS 394 - Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7000 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (RDT&E)				
900501	R425	Incremental funding in the amount of \$4,000.00 for TI 018 (RDT&E)				
9100	R425	Exercised Option Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7100 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. CLIN 9100 is a holding CLIN and the ceiling will be reduced by the amount of ceiling applied to separate CLINs to maintain the proper task order value. (Fund Type - TBD)				
9101	R425	CODE 80 - Option Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7101 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (Fund Type - TBD)				
910101	R425	Funding for TI 029 in the amount of \$90.00. (WCF)				
910102	R425	Funds in the amount of \$1,700 for TI-038. (Fund Type - OTHER)				
9102	R425	SEA 07TR - Option Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7102 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (Fund Type - TBD)				
910201	R425	Funds in the amount of \$18,000 for TI-025. Mod 25 reduces SLIN by \$15,710.62 for a balance of \$2,289.38. (OPN)				
9103	R425	ONR - Option Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7103 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (Fund Type - TBD)				
910301	R425	Funds in the amount of \$5,000 for TI-030. Mod 13 reduces SLIN by \$5,000 for a balance of \$0. (RDT&E)				
9104	R425	PMS 397 - Option Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7105 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (Fund Type - TBD)				

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Item	PSC	Supplies/Services	Qty	Unit	Est.	Cost
910401	R425	Funds in the amount of \$13,000 for TI-035. (RDT&E)				
910402	R425	Funds in the amount of \$4,557 for TI-037. (RDT&E)				
910403	R425	Funds in the amount of \$3,000 for TI-032. (RDT&E)				
910404	R425	Funds in the amount of \$21,000 for TI-035B. (RDT&E)				
910405	R425	Funds in the amount of \$3,100 for TI-037A. (RDT&E)				
910406	R425	Funds increased from \$5,000 by \$1,730 to \$6,730 on mod 15 under TI-37 Rev B. (RDT&E)				
910407	R425	Funds in the amount of \$20,000 for TI-032A. Mod 30 deobligated \$14,007.77 per TI-032B. (RDT&E)				
9105	R425	PMS 391 - Option Year 1 not to exceed Other Direct Costs (ODCs) in support of CLIN 7108 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. (Fund Type - TBD)				
910501	R425	De-obligation of funds by \$3,672.00 in Mod 27. (OPN)				
9200	R425	OPTION 2 - Not to exceed Other Direct Costs (ODC) in support of CLIN 7200, consisting of materials, travel, and miscellaneous. ODC's are non-fee bearing. Note: CLIN 9200 is a holding CLIN and is provided for informational and tracking purposes only. (Fund Type - TBD)				
9201		Option Period 2 (Exercised) ODC				
9201AA	R425	ODC in support of CLIN 7201AG (TI-55) (Fund Type - OTHER)				
9201AB	R425	ODC in support of CLIN 7201AH (TI-58) (RDT&E)				
9201AC	R425	ODC in support of CLIN 7201AJ (TI-59) (RDT&E)				
9201AD	R425	ODC in support of CLIN 7201AK (TI-59); DE-OB under TI-59D by \$500 for new total of \$\$3,000.00 (RDT&E)				
9201AE	R425	ODC in support of CLIN 7201AL (TI-59A); DE-OB under TI-59D by \$14,500 from \$24,500 for a total of \$10,000 (RDT&E)				
9201AF	R425	ODC in support of CLIN 7201AN (TI-64)/ TI-64A (OPN)				
9201AG	R425	ODC in support of CLIN 7201AP (TI-65): De-obligated \$4,800 under TI-65B for a new total of \$7,200. (RDT&E)				
9201AH	R425	TI-52A, 'Plus Up' under TI-52C raises CLIN from \$1,500.00 by \$800.00 for a balance of \$2,300.00. ODC in support of CLIN 7201AA (TI-52A) (O&MN,N)				
9201AJ	R425	ODC in support of CLIN 7201AS (TI-68) (RDT&E)				
9201AK	R425	ODC in support of CLIN 7201AT (TI-69) (RDT&E)				
9201AL	R425	ODC in support of CLIN 7201AX (TI-63A) (OPN)				
9201AM	R425	ODC in support of CLIN 7201AW (TI-53) (WCF)				
9201AN	R425	ODC in support of CLIN 7201BA (TI-68A) (RDT&E)				
9300	R425	OPTION 3 - Not to exceed Other Direct Costs (ODC) in support of CLIN 7300, consisting of materials, travel, and miscellaneous. ODC's are non-fee bearing. Note: CLIN 9300 is a holding CLIN and is provided for informational and tracking purposes only. (Fund Type - TBD)				

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Item	PSC	Supplies/Services	Qty	Unit	Est.	Cost
9301		Option Period 3 (Exercised) ODC				
9301AB	R425	TI-75 (OPN)				
9301AE	R425	TI-78 (Fund Type - OTHER)				
9301AF	R425	TI-79 (WCF)				
9301AH	R425	TI-82 (OPN)				
9301AJ	R425	TI-83 (RDT&E)				
9301AK	R425	TI-84 (RDT&E)				
9301AL	R425	TI-85 (RDT&E)				
9301AM	R425	TI-86 (RDT&E)				
9301AN	R425	TI-74 (RDT&E)				
9301AP	R425	TI-73; 2410 (A) AUTHORITY TO BE INVOKED (O&MN,N)				
9301AQ	R425	TI-71 (O&MN,N)				
9301AT	R425	T1-91 (SCN)				
9301AU	R425	ODC in support of CLIN 7301; TI-085A FY 19 NEW LOA INCREMENTAL FUNDING (RDT&E). (RDT&E)				
9301AV	R425	ODC in support of CLIN 7301. TI-088 FY 19 NEW LOA, INCREMENTAL FUNDING - SERVICE COST CENTER (SCC). (Fund Type - OTHER)				
9301AW	R425	ODC in support of CLIN 7301; TI-84A (RDT&E)				
9301AX	R425	ODC in support of CLIN 7301; TI-93 (SCN)				
9301AY	R425	ODC in support of CLIN 7301; TI-94 (RDT&E)				
9301BA	R425	ODC in support of CLIN 7301; TI-96 (O&MN,N)				
9301BG	R425	ODC in support of CLIN 7301 (O&MN,N)				
9301BH	R425	ODC in support of CLIN 7301 (RDT&E)				
9301BJ	R425	ODC in support of CLIN 7301 (Fund Type - OTHER)				
9400	R425	Award Term Year 2 not to exceed Other Direct Costs (ODCs) in support of CLIN 7400 consisting of materials, travel, and miscellaneous. ODCs are non-fee bearing. CLIN 9400 is a holding CLIN and the ceiling will be reduced by the amount of ceiling applied to separate CLINs to maintain the proper task order value. (Fund Type - TBD)				
		Option				

ODCs are non-fee bearing.

**NOTE A: LEVEL OF EFFORT**

The labor hours listed above in "HR" in the Base Period and each Option and Award Term Period reflect the Level of Effort provided in Section H, 5252.216-9122 (Alt. 1) Level of Effort clause.



**NOTE B: OPTION**

Option Item, to which the OPTION clause in SECTION I applies, shall be supplied only if said Option is exercised.

**NOTE C: AWARD TERM**

Award Term Item, shall be supplied only if said Item is earned, retained and awarded in accordance with the AWARD TERM PLAN provided in Attachment 8. Notwithstanding the word "Option" which appears in the SECTION B CLIN description or elsewhere in this Solicitation and resulting Task Order, for Award Term Items, Award Terms are not "Option" Items until they are earned.

**NOTE E: ODC**

The Government Not To Exceed amount excluding applicable indirect costs is \$300,424.00 per year. These Items are non-fee bearing CLINs. Non-fee bearing refers to fee (i.e., profit), not allowable indirect costs or burdens.

**NOTE F: INCENTIVE FEE**

The minimum fee shall the maximum fee shall as stated in FAR clause 52.216-10 INCENTIVE FEE in SECTION I.

Note (2): The target fee is applied to all costs (direct, indirect, subcontracting, indirect portion of pass through) and is inclusive of the fee portion of pass through.

The target cost, target fee amounts shall be based upon the actual level of effort the contractor provides. Average hourly rate is determined by including all allowable costs (including COM, if applicable).

Fee/hour is calculated on cost less COM (if applicable). (If COM is proposed please add needed columns.)

**INCENTIVE FEE TABLE**

Incentive Fee Table					
		Hourly Rates		Totals	
CLIN	QTY (Hours)	Target Fee/Hrs (TF)	Target Cost/Hrs (Rate)	Target Fee (Hrs*TF)	Target Cost (Hrs*Rate)
7000					
7100					
*Reserved					
7300					
7400					

\*See mod 21

(i) The CPIF target cost for CLIN 7000, and if exercised CLINs 7100 and 7200 and if earned CLINs 7300 and 7400 shall be entered in the Target Cost column in the INCENTIVE FEE TABLE above. The Target Cost is determined by multiplying the allowable hours worked (Qty (*Hrs*)), including subcontractor hours, corresponding to each CLIN by the target cost per hour (Target Cost/Hour (*Rate*)). The target cost per hour (Target Cost/Hour (*Rate*)) shall include all proposed cost (including cost of money (if proposed) and subcontractor costs) for the corresponding CLIN. Fees charged by subcontractors shall also be included in the target cost.

(ii) The CPIF target fee for CLIN 7000, and if exercised CLINs 7100 and 7200 and if earned CLINS 7300 and 7400 shall be determined by multiplying the allowable hours worked (Qty (*Hrs*)), including subcontractor hours, for the corresponding CLIN by the target fee per hour (Target Fee/Hour (TF)) from the INCENTIVE FEE TABLE. This shall be entered in the Target Fee (Target Fee (Hrs \* TF)) column of the INCENTIVE FEE TABLE above.

(iii) The share ratio for the CPIF portion of the fee structure is for both under-runs and over-runs. The fee earned under the CPIF portion of the fee structure will be based on the total allowable cost incurred by the contractor in comparison to the *final* target cost for each of the aforementioned labor CLINs. See the Incentive Fee clause (FAR 52.216-10) in Section I of this Task Order.

(iv) **Final Costs & Fees.** Actual resulting fee will be calculated at the end of the Period of Performance (POP) for each CLIN. Final cost and fee are shown in the following table.

Note I: Payment of Fee Table (CPFF Line Items Only)

Line Item	Hours	Fixed Fee	Fixed Fee Per Hour
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7200

\*The fixed fee per hour may change slightly to correct any rounding errors if the line item is fully funded. If the line is not fully funded, the fixed fee shall per hour.

CLIN	Delivered Hrs	Actual Cost Per Hr	Actual Cost (A*B=C)	Final Target Incentive Fee	Incentive Fee Share Line Adjustment	Computed Incentive Fee (D+E=F)	Total (C+F=G)
7000							
7100							
7200							
7300							
7400							

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**NOTE G: LABOR TRIPWIRE JUSTIFICATIONS**

(a) The contractor shall advise the COR and the Contract Specialist, by e-mail, if the pending *substitution or* addition of any individual (Key or non-Key) will be at a fully loaded (through target fee) labor rate that exceeds the labor tripwire amount. The contractor shall not proceed with the addition until they are advised by the Contract Specialist that the request has been approved. *This requirement does not relieve the contractor’s obligation under clauses H.7 “Substitution of Team Members and Substitution of Personnel” and 52.244-2 “Subcontracts” contained in the base Seaport contract.*

(b) The contractor's request shall include: the proposed individual's resume for Key Personnel Substitutions, labor hourly rate build-up, labor hours per work year, detailed justification for the addition of the particular individual based on his/her technical expertise and projected technical impact on the Task Order/Technical Instruction. If the individual is a subcontractor or consultant, the rate build-up shall include the prime contractor's pass through rate.

(c) Currently, the hourly labor tripwire is \$156 per hour, regardless of the number of labor hours the proposed individual will work. The contractor will be advised of any changes to this tripwire level that occur during performance.

**NOTE H: SUBSTITUTION OF KEY PERSONNEL**

The contractor agrees to assign those key persons identified with the Task Order response. No substitution shall be made without prior notification to and concurrence of the Task Order Contracting Officer (Procuring Contracting Officer). The contractor shall comply with clause no. H.7 of the base contract when requesting approval for substitution of key personnel.

The following Key Personnel are approved under this Task Order:

<u>Labor Category</u>	<u>Employee Name</u>	<u>Company</u>
Principal Engineer		
Principal Engineer		
Principal Engineer		
Senior Software Development Engineer Type 1		
Senior Software Development Engineer Type 1		
Senior Software Development Engineer Type 1		
Senior Software Development Engineer Type 2		
Senior Software Development Engineer Type 2		
Senior Software Development Engineer Type 2		
Software Safety Engineer		
Software Safety Engineer		
Software Safety Engineer		
Senior Control Systems Engineer		
Senior Control Systems Engineer		

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**NOTE I: CONSENT TO SUBCONTRACT**

For subcontracts and consulting agreements for services, where the prime contractor anticipates that hours delivered will be counted against the hours in the Task Order Level of Effort clause in Section G, Consent to Subcontract authority is retained by the Task Order Contracting Officer (Procuring Contracting Officer). The contractor shall comply with clause no. 52.244-2 of the base contract when requesting consent to subcontract.

The following subcontractors are approved under this Task Order:

**NOTE J: Additional CLINS**

Additional CLINs may be unilaterally created by the Procuring Contracting Officer (PCO) during the performance of this Task Order to allow for additional SLINs as needed or to accommodate the multiple types of funds that may be used under this Order. These modifications will not change the overall level of effort or value of the task order.

**HQB-2-0015 Payment of Fee(s) (Level of Effort-ALT 1) (NAVSEA) (MAY 2010)**

(a) For purposes of this contract, "fee" means "target fee" in cost-plus-incentive-fee type contracts, "base fee" in cost-plus-award-fee type contracts, or "fixed fee" in cost-plus-fixedfee type contracts for level of effort type contracts.

(b) The Government shall make payments to the Contractor, subject to and in accordance with the clause in this contract entitled "FIXED FEE" (FAR 52.216-8) or "INCENTIVE FEE", (FAR 52.216-10), as applicable. Such payments shall be submitted by and payable to the Contractor pursuant to the clause of this contract entitled "ALLOWABLE COST AND PAYMENT" (FAR 52.216-7), subject to the withholding terms and conditions of the "FIXED FEE" or "INCENTIVE FEE" clause, as applicable, and shall be paid at the hourly rate(s) specified above per man-hour performed and invoiced. Total fee(s) paid to the Contractor shall not exceed the fee amount(s) set forth in this contract. In no event shall the Government be required to pay the Contractor any amount in excess of the funds obligated under this contract.

(End of Text)

**HQ B-2-0015 PAYMENTS OF FEE(S) (LEVEL OF EFFORT – ALTERNATE 1) (NAVSEA) (MAY 2010) [NOTE: THIS CLAUSE IS APPLICABLE TO CPFF LINE ITEMS]**

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(a) For purposes of this contract, "fee" means "target fee" in cost-plus-incentive-fee type contracts, "base fee" in cost-plus-award-fee type contracts, or "fixed fee" in cost-plus-fixed-fee type contracts for level of effort type contracts.

(b) The Government shall make payments to the Contractor, subject to and in accordance with the clause in this contract entitled "FIXED FEE" (FAR 52.216-8) or "INCENTIVE FEE", (FAR 52.216-10), as applicable. Such payments shall be submitted by and payable to the Contractor pursuant to the clause of this contract entitled "ALLOWABLE COST AND PAYMENT" (FAR 52.216-7), subject to the withholding terms and conditions of the "FIXED FEE" or "INCENTIVE FEE" clause, as applicable, and shall be paid at the hourly rate(s) specified above per man-hour performed and invoiced. Total fee(s) paid to the Contractor shall not exceed the fee amount(s) set forth in this contract. In no event shall the Government be required to pay the Contractor any amount in excess of the funds obligated under this contract.

(End of Text)

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## SECTION C DESCRIPTIONS AND SPECIFICATIONS

### Computer Simulation and Control Support

The tasking contained in this Statement of Work falls under Product Service Codes R425 and AD24. The services to be performed under this task order are considered performance based and will be evaluated by the Government.

#### 1.0 Objective

This Performance Work Statement is for engineering services in support of the Naval Architecture and Engineering Department Code 80 and other organizations associated with the Naval Surface Warfare Center Carderock Division to provide technical support for data analysis, control system development and software development and modifications. The work performed will be in support of various submarines, surface ships, submerged vehicles, and other autonomous vehicles going through both air and water and associated trainers and simulators from any of the above.

#### 2.0 Scope of Work

The work is divided among multiple work areas that are interrelated. They are:

##### Task Area 1

##### Automatic Control Systems

- a. Develop the initial mathematical model of ships or vehicles, to describe their responses to external hydrodynamic and dynamic forces and disturbances. Develop parameters of these models from new or known hydrodynamic and fluid dynamic theory and/or system identification techniques. (CDRL A002, A003, A006, A007)
- b. Implement the model structure and its parametric values via computer software for the purposes of simulation and validation. Perform sensitivity and statistical tests to verify the model as an accurate representation of the physical system. Examine the sensitivity of performance to perturbations in model parameters using the simulation. (CDRL A002, A003, A006, A007)
- c. Establish the feasibility of control strategies and the required control system specifications with respect to the functions of the controller. Define acceptable control structures by considering the critical concepts of controllability and stability of the vehicle. Establish the necessary system specifications in terms of the desired system performance and operational constraints. (CDRL A002, A003, A006, A007)
- d. Design, fabricate, and simulate a control system using classical, modern (optimal), or other industry accepted methods or a combination thereof. Document the selection of the techniques to be used. (CDRL A002, A003, A006, A007)
- e. Provide human operator modeling and human factors engineered man-machine interface

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design for control systems. (CDRL A002, A003, A006, A007)

f. Perform sensitivity studies for the control system using computer simulations. (CDRL A002, A003, A006, A007)

g. Evaluate and compare various control system designs with respect to desired performance qualities. (CDRL A002, A003, A006, A007)

h. Develop and improve existing math models such as simulations and controller. Develop the simulation software required to verify and validate these modifications, and perform sensitivity studies to determine the effect of these modifications. (CDRL A002, A003, A006, A007, A009)

## Task Area 2

### Estimation Algorithms and Operator Aided Information Systems

a. Develop the initial mathematical model of the vehicle, to describe its responses to external hydrodynamic and dynamic forces and disturbances. Develop parameters of this model from known hydrodynamic and fluid dynamic theory and/or system identification techniques. (CDRL A002, A003, A006)

b. Implement the model structure and its parametric values via computer software for the purposes of simulation and validation. Perform statistical tests to verify the model as an accurate representation of the physical system. Examine the sensitivity of performance to perturbations in model parameters using the simulation. (CDRL A002, A003, A006)

c. Establish the feasibility of estimation strategies and the required estimation system specifications with respect to the functions of the system. Define acceptable estimation structures by considering the critical concepts of data fusion and man-machine interface. Establish the necessary system specifications in terms of the desired system performance and operational constraints. (CDRL A002, A003, A006)

d. Design, fabricate and simulate an estimation system using any of a number of techniques including artificial intelligence, neural networks, fuzzy logic, heuristic reasoning, rule-based methods, and other intelligent concepts or a combination there of. Document the selection of the technique to be used. (CDRL A002, A003, A006)

e. Perform and report out sensitivity studies for the estimation system using computer simulations and identify non intuitive correlations when possible. (CDRL A002, A003, A006)

f. Evaluate and compare various estimation system designs with respect to desired performance qualities. (CDRL A002, A003, A006)

## Task Area 3

Dynamic Control System Simulator (DCSS) Computer System and Submarine Motion Base Simulator Software, Training Devices, and Hardware Conversion, Development and implementation

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- a. Adapt submarine vehicle dynamics simulations for real-time use with the DCSS submarine motion base simulator and other trainer devices. Similarly adapt other simulations for their corresponding training devices. (CDRL A002, A003, A007, A008, A009)
- b. Program graphics software for use on the Submarine Motion Base Simulator in conjunction with DCSS real-time simulations. (CDRL A002, A003, A007, A008, A009)
- c. Develop user-oriented documentation describing limitations and use of the Submarine Motion Base Simulator for real-time programming and graphics software. (CDRL A002, A003, A007, A008, A009)
- d. Convert data files from one storage medium to a new storage medium to accommodate a change in computer system architecture. Convert or transfer software programs from one computer system to a new system including the removal of machine dependent software coding in the programs, converting the job control language, etc. Convert software from one higher order computer language to another; e.g. FORTRAN to C, and between FORTRAN 77 and 90. Convert software and data files as needed for software upgrades. (CDRL A002, A003, A007, A008, A009)
- e. Develop data acquisition software, real-time control software and data reduction software for use on the DCSS simulation computer and Submarine Motion Base Simulator. (CDRL A002, A003, A007, A008, A009)
- h. Convert laboratory unique simulation software to transportable, supportable, tactical and training system standards. (CDRL A002, A003, A007, A008, A009)
- i. Develop software analysis, requirements, design and test documentation. (CDRL A002, A003, A007, A008, A009)
- j. Maintain configuration management of technical data records, develop and maintain an EXCEL and ACCESS data base cross referencing information, sponsors, etc. (CDRL A002, A003, A007, A008, A009)
- k. Implement, update and develop software and hardware for motion base simulation and or training devices. (CDRL A002, A003, A007, A008, A009)
- l. Provide personnel to support the computer simulation software, the computer hardware systems required to run this software and the integration of each for the operations of the motion based simulator and trainers both at NSWCCD and the other motion based trainer facilities. (CDRL A002, A003, A007, A008, A009)

#### Task Area 4

##### Computer Design Generation and Evaluation of Total Ship Impact of Subsystems Related to Hydrodynamics and Ship Design

- a. Design computer programs reflecting the impact of sea keeping on mission capability and ship size, while not degrading maneuvering or powering performance. (CDRL A002, A003, A007)
- b. Evaluate a parametric series of hull forms analytically for both sea keeping and resistance characteristics. Evaluate the best hull forms in the series for total ship impact for a variety of



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missions. (CDRL A002, A003, A007)

c. Collect, collate, and organize subsystems technical data to develop databases of technical facts and information to be used in reviewing program/project plans addressing the total ship. (CDRL A002, A003, A007)

d. Identify parametrically low cost of construction hulls that also offer improved hydrodynamic performance. (CDRL A002, A003, A007)

e. Develop algorithms to provide real-time alternative course/speed combinations subject to various ship mission objectives and subsystem operational constraints. (CDRL A002, A003, A007)

f. Develop algorithm programs to provide effects of ship motions on human operator performance degradation. (CDRL A002, A003, A007)

g. Evaluate the effect of large hydrodynamic appendages such as towed arrays and sonar domes and their associated equipment on the ship resistance, propulsion, maneuvering, sea keeping, stability, total displacement, internal volume and other ship characteristics that may be significantly affected. Provide design support for modifying the ship design to minimize any adverse ship impact due to these hydrodynamic appendages. (CDRL A002, A003, A007)

h. Provide an uncertainty analysis of data acquired from model tests and full-scale trials. (CDRL A002, A003, A007)

## Task Area 5

### Ship Control Systems Design, Life Cycle, and Software Safety Analysis Support

a. Provide analytical and technical support evaluating system level performance of ship control systems and all related elements, with the principal objective of developing methods for assuring hardware and software safety and accurate performance, adequate reliability and maintainability, and providing related technical engineering support for related computer driven software and hardware applications ship board and within the fleet. (CDRL A002, A003, A007, A008, A009)

b. Investigate emergent hardware and software problems including causes and proposed solutions for problem in shipboard and fleet software driven applications such as ship control station, position control units, sensors and tactical software. (CDRL A002, A003, A007, A008, A009)

c. Develop trials, testing and real time patrol analysis tools to identify software and computer driven hardware problems and failure. (CDRL A002, A003, A007, A008, A009)

d. Support the preparation and conduct of shipbuilder fabrication, installation and testing of tactical ship control systems and other non-propulsion electronic (NPE) systems components, including review of test schedules and test plans for ships under design and construction. Review tactical ship control systems and other NPE system fabricated by the shipbuilder for compliance with ship specifications, best practices and drawings. Review test schedules to ensure the system integration testing will adequately support ship schedules and that test plans are adequate to meet

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the requirements specified in the ship and system specifications. Verify that all ship control systems and other NPE system tactical hardware and software functions are exercised by integration tests with appropriate pass/fail criteria to verify system performance compliance with ship and system specification requirements and are certifiable if the system design requires it. (CDRL A002, A003, A007, A008, A009)

e. Conduct in-depth analyses of work center logs, patrol logs, problem reports, 2-kilos, refit work packages and post refit reports. Identify problems in system performance, component operation, and degradation trends in ship system software related systems such as ship control system operation. (CDRL A002, A003, A007, A008, A009)

f. Review and monitor status of design changes, operational and design problems of system that may impact ship control and other software driven software application with software safety implications. Participate in working groups assigned to follow such activities outside the ship control system. (CDRL A002, A003, A007, A008, A009)

g. Perform engineering analysis of shipyard installation procedures, construction schedules, ship control station Rapid Installation Programs (RIPs), integration and testing of new hulls. Perform or monitor ship control system software revision installation and validation testing. Review new construction Quality Deficiency Reports (QDRs), problem reports, compiling data, and performing trend analysis. (CDRL A002, A003, A007, A008, A009)

h. Analyze the impact on ship control performance resulting from proposed changes in hull configuration and other interfacing systems and quantifying effects on ship control and software revisions. (CDRL A002, A003, A007, A008, A009)

i. Prepare Engineering Change Proposals (ECPs) or the equivalent for other classes, required to modify the ship control system to implement required changes. (CDRL A002, A003, A007, A008, A009)

j. Technically review all software configuration and change control documentation, Preliminary Engineering Change Proposals (PECPs), ECPs and problem reports. Verify the technical accuracy and need for the changes, as well as consistency, with the ship control Configuration Management (CM) plan. Documentation includes Ship Control Station Technical Manuals, Ship Systems Manuals, Maintenance Requirements Cards, Maintenance Plans, Standard Maintenance Procedures (SCSTMs, SSMs, MRCs, MPs, SMPs), and drawing plans and test procedures. (CDRL A002, A003, A007, A008, A009)

k. Perform software configuration management and maintain status for all tactical ship control system and trainer software and documentation. (CDRL A002, A003, A007, A008, A009)

l. Implement and test approved changes to the tactical ship control system and trainer software. Develop software and perform software quality assurance evaluation. Develop software change packages for the approved software changes, including documentation changes and certified software releases. (CDRL A002, A003, A007, A008, A009)

m. Provide engineering assistance during special trials, Demonstration and Shakedown Operations (DASOs) refit periods, Post Shakedown Availability (PSA), and Refueling and Engineering overhauls (ROH, EOH) to develop corrective actions and emergent temporary

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engineering change packages. Support the planning, development, fabrication, installation, and testing of required engineering changes for shipyard or shore-based facility ship control system hardware and software. (CDRL A002, A003, A007, A008, A009)

n. Conduct safety analyses of the ship control system and software, including automatic control and estimation algorithms and risk management analyses of software development processes. Provide independent review and assessments of ship control system safety analyses produced by the Shipbuilder/ Lead Design Yard. (CDRL A002, A003, A007, A008, A009)

o. Review and provide guidance to the requesting organization for all software which takes automatic control of ship board systems. Support the retrieval and review of the documentation involved in a NAVSEA and/or NSWCCD audit of the ship control system. (CDRL A002, A003, A007, A008, A009)

Task Area 6. Departmental Information Technology (IT) and Information Assurance (IA) Support

a. Support Information Assurance efforts including scanning, patching and remediation of Windows and Red Hat Linux operating systems. (CDRL A006, A007, A008, A009)

b. Support wireless 802.11 protocol network configurations and troubleshooting of operations. (CDRL A006, A007, A008, A009)

c. Maintain qualifications for being an appointed Media Transfer Agent in accordance with Carderock Instruction 5510.12 on Classified Information Systems Removable Media Policy. Be responsible for proper handling and compliance with procedure to move data from higher classification systems to lower classification systems. The Contractor shall ensure that personnel designated as Media Transfer Agents have the appropriate security clearance in accordance with the Contract DD Form 254 Contract Security Classification Specification. (CDRL A006, A007, A008, A009)

d. The contractor is responsible for sustaining all certifications required by Cyber Security Workforce (CSWF) by facilitating Continuing Education requirements and certification fees.

e. Support Information Technology Certification and Accreditation (C&A) efforts including performing required scans, remediation, maintaining software and hardware inventories, preparing documentation and artifacts to support C&A packages. (CDRL A006, A007, A008, A009)

f. Provide system engineering for designing and building networks to include Windows and/or Linux servers with Active Directory, automated system updates, virtualization technologies, all in accordance with DOD policy. Use scripting and programming languages as tools to support efforts.

g. Be familiar with and know how to implement Defense Information Systems Agency (DISA) Secure Technical Implementation Guides (STIGs) on RDT&E systems and servers. (CDRL A006, A007, A008, A009)

h. Provide desktop support to users including troubleshooting, installing and repairing applications, hardware and peripherals.

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i. The contractor shall provide support for operation and maintenance services for RDT&E networks. The networks may employ Ethernet, optical, and wireless technologies. Support shall include trouble shooting and diagnostic testing of system equipment to determine the cause of problems/failures and repairing those problems/failures in a timely manner. Troubleshooting may be required on system equipment which includes, but is not limited to, file servers, blade servers, routers, hubs, switches, power supplies, UPSs, network interface cards, and terminal servers. (CDRL A006, A007, A008, A009)

j. The contractor shall provide engineering services to support the overall network architecture and data, voice, and video applications operating on the network, engineering services to review and analyze application requirements; engineering planning and design assistance; equipment and component recommendation, screening for standards compliance; installation and testing support to include verification and validation; documentation preparation, review , analysis; engineering-level monitoring of the network which includes such things as determining cause of slowed network traffic, predicting bottlenecks in advance, resolving/addressing conflicts, developing and maintaining an IT inventory and incorporate a formal configuration process; and improve design to virtual LAN architecture to ensure performance and enforce proper security controls. (CDRL A006, A007, A008, A009)

k. The contractor shall provide the necessary labor to provide server administration for servers that support Department 80 at the West Bethesda, Memphis and Little Creek sites. Server/system administration shall include the following: (CDRL A006, A007, A008, A009)

- 1) Provide installation, configuration, integration, user registration, file backups, troubleshooting and problem resolution for servers associated with network operations and administration, firewall, and corporate applications.
- 2) Provide installation, configuration, integration, file backups, troubleshooting and problem resolution for Storage Area Networks.
- 3) Provide support for the administration, configuration, backup and restore and problem resolution of database servers.
- 4) Complete the installation of security patches on servers, remediation of vulnerabilities and reporting of patch compliance.
- 5) Assist the government in identifying future requirements to keep the network current such as advice on security patches and remediation.
- 6) Performing routine audits of systems and software, adding, removing, or updating user accounts information, resetting passwords.
- 7) Answering technical queries, responsibility for security, documenting system configuration, and performance tuning.
- 8) Support including Red Hat Linux and Windows domain for Common Access Card or alternate token authentication.

Task Area 7.

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- Ship Design Analysis Software Development

a. The contractor shall provide computer science and engineering support to design, develop, and test specialized ship, ship systems, and weapon systems computer software models and analysis. (CDRL A006, A007, A009)

b. The contractor shall provide software development support to applications, utilities, toolkits, and software related to efficient ship design, analyses, and operations, including the Leading Edge Architecture for Prototyping Systems (LEAPS), sea keeping motion prediction tools such as FREDYNE and Ship Motion and Maneuvering in Waves simulation software, and other unique ship development software necessary for safe and efficient operations. (CDRL A008, A009)

Task Area 8. Technical analysis, data collection and analysis, algorithm development and refinement:

a. Provide engineering and analytical services in collecting, processing, analyzing, and reporting experimental and operational data. (CDRL A002, A003, A008, A009)

b. Provide for development and administration of data architecture, data storage, databases, software development and query capabilities to store and process information. (CDRL A002, A003, A006, A008, A009)

c. Develop classification algorithms utilizing advanced intelligence techniques as necessary to filter and classify data. (CDRL A002, A003, A008, A009)

d. Provide for software documentation from initial specifications through configuration management in accordance with best software configuration management practices. (CDRL A002, A003, A008, A009)

e. Document information yielded from data analysis in technical and periodical reports as required. (CDRL A002, A003, A008, A009)

Task Area 9. Contract Management:

a. The Contractor shall submit monthly status reports. (A001)

b. The Contractor shall support required technical meetings. (A004, A005)

2.1

Contract Data Requirements List (CDRL)

The following data deliverables are intended to support the requirements outlined in this PWS. These CDRLs can be used to provide specified data deliverables for any task sections as required. All data shall be provided in accordance with the requirements stated in CDRL Form 1423, Attachment A to this Task Order.

CDRL	DID	Name
A001	DI-MGMT-80227	Contractor Progress, Status, and Management Report
A002	DI-MISC-80508B	Technical Report –Study/Services
A003	DI-MISC-80711A	Scientific and Technical Reports
A004	DI-ADMN-81249A	Conference Agenda
A005	DI-ADMIN-81250A	Conference Minutes
A006	DI-DRPR-81680	Engineering Documentation Product Drawings
A007	DI-NDTI-80566A	Test Plan
A008	DI-IPSC-81443A	Software User Manual (SUM)
A009	DI-IPSC-81756	Software Documentation

### 30 PERSONNEL QUALIFICATIONS

#### General Requirements -

31 The contractor shall be responsible for employing technically qualified personnel to perform the tasks to be performed hereunder and where requested provide resumes and similar work experience to document employee competencies. The contractor shall maintain the personnel, organization and administrative control necessary to ensure that the work delivered meets the task order specification requirements.

a. The work history of each employee must show experience related to the task and functions he/she intends to perform under this task order. The Government reserves the right, during the term of this task order, to request work histories on any contractor employee for purposes of verifying compliance with this requirement.

b. If the contracting officer questions the qualifications or competence of any person performing under the task order, the burden of proof to sustain that the person is qualified as prescribed herein shall be upon the contractor.

c. All key personnel shall hold or be capable of obtaining a SECRET clearance prior to being granted access to classified information up to the level of SECRET. All non-key personnel shall

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hold or be capable of obtaining a CONFIDENTIAL clearance prior to being granted access to classified information.

32 Key Personnel – The following labor categories are designated Key Personnel for this task order. Resumes shall be submitted for each category. The quantities indicated in parenthesis by the key category description are a minimum requirement and resumes shall be submitted for all proposed personnel in key categories. The Target Qualifications for the Key Personnel labor categories are as follows:

An asterisk precedes Key Personnel

(a) \*Principal Engineer – Two resumes:

Target Education:

Master's Degree in Electrical Engineering, Control Systems, Mathematics, or Naval Architecture

Target Experience:

Ten years of experience in directing and managing major naval ship engineering and acquisition programs. The desired ten years of experience should include major involvement in complete ship design and acquisition programs including: engineering design trade-offs; and complete technical management plans. The experience should also include analysis of ship performance; ship systems engineering; ship control and simulation; propulsion; and control system trade-off analysis. In addition to the education and experience requirements, the proposed key personnel should demonstrate currency in the field, such as having been published within their field or by other means. Specific experience in the physics-based submarine and surface ship maneuvering prediction tools, TEMPEST or FREDYN software is desirable.

(b) \*Senior Software Development Engineer Type 1 – Two resumes

Target Education:

Bachelor's Degree in Mathematics, Physics, Engineering or Computer Science

Target Experience:

Ten years of experience in software development, testing, optimization and documentation. The desired experience should include:

- (1) Five years of configuration management experience with real-time tactical software;
- (2) Experience in developing and conducting factory acceptance or shipboard test procedures;
- (3) Experience in developing control software, i.e., in establishing control system software performance requirements and evaluating software design performance;
- (4) Experience in developing training simulations;
- (5) Experience in the development of computer program software and preparation of computer program documentation in accordance with DOD software development and documentation standards DOD-STD-2167A, MIL-STD-498 and commercial software standards IEEE/EIA

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(c) \*Senior Software Development Engineer Type 2 – Two resumes

**Target Education:** Bachelor's Degree in Computer Science, Mathematics or Engineering

Target Experience:

Ten years of demonstrated expertise in programming and developing software necessary to design, model, and simulate a ship. Experience in designing, planning, and programming with the Leading Edge Architecture for Prototyping Systems (LEAPS) is highly desirable.

Demonstrated recent expertise is desired in the following areas:

- 1) Advanced knowledge of C++.
- 2) Advanced knowledge of object-oriented programming and modeling.
- 3) Knowledge of object oriented data structures.
- 4) Knowledge of and experience with OpenGL or DirectX graphics programming.
- 5) Knowledge of and experience with Graphical User Interface (GUI) design and development.
- 6) Knowledge of and experience with parallel and multi-threaded architectures and development.

(d)

\*Software Safety Engineer – Two resumes

**Target Education:** Bachelor's Degree in Computer Science, Mathematics, Science, or Engineering.

Target Experience:

Ten years of experience with software and system safety analysis, risk assessment, and safety verification in accordance with the requirements of NAVSEA T9044-AD-MAN-010 REQMAN for Fly-By-Wire, MIL-STD-882E and the DOD Joint Software System Safety Engineering Handbook on a variety of systems and producing documentation of analysis results. Desired experience shall include experience in preparation of system/software safety requirements and verification requirements, execution of system/software safety analyses, safety analysis reports and data packages/preparation material for safety review panels (such as Weapons System Evaluation Review Board (WSERBs) Technical Review Panel (TRP)), preparation of System Safety Program Plans (SSPPs) and System Safety Management Plans (SSMPs); analysis and assessment of ECPs, Software Trouble Reports (STRs), and Software Change Notices (SCNs); and development of safety test plans and review of safety test documentation. Experience in the development of software documentation should include preparation of Software Development Plans (SDPs), Software Requirement Specifications (SRSs), Software Configuration Management Plans (SCMPs), Software Detailed Design Documents (SDDD), and Interface



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Design Documents (IDDs); and experience in the planning and performance of software quality evaluation throughout the software development cycle.

(e) \*Senior Control Systems Engineer - Two resumes

Target Education:

Master's Degree in Mechanical Engineering

Target Experience:

Ten years of related control theory experience. At least five of the desired ten years should be in applications of control theory and simulation in the marine environment, specifically with reference to vehicle (as opposed to subsystem) control of submarines, conventional surface ships and advanced craft. The desired ten years shall also include experience in fields related to control theory and vehicle control including man-machine systems design and theory, estimation and identification, operator aiding systems, digital systems, and implementation of these systems.

33 Non-Key Personnel – The following labor categories are designated non-Key Personnel for this task order. Although resumes are not required for Non-Key Personnel, the contractor shall provide a listing of non-key personnel who will be assigned to the categories of labor specified below as non-key. These personnel must meet the qualifications specified in this section to be acceptable and the offeror must certify that all proposed personnel meet the prescribed requirements.

Non-Key Personnel Categories

All offerors must certify that all non-key personnel performing under this task order meet the Government's minimum education and experience requirements:

(a) Senior Engineer

Minimum Education:

Bachelor's Degree in engineering, physics or mathematics (if offeror proposes an employee with a higher education, five years of experience may be deducted)

**Minimum Experience:** Ten years of engineering application experience. The experience shall include the following areas: U. S. Navy ship research and development, analytical modeling and evaluation of vehicle dynamics, motion response analysis, digital simulation studies, sea spectra analysis, sea keeping analysis, hydrodynamics, control system analysis, computer software development, numerical analysis, and test and trials planning. Experience with advanced marine vehicles and shall also be included with the experience requirements.

(b) Simulation Systems Engineer

Minimum Education:

Bachelor's Degree in physics, electronics or electrical engineering.

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Minimum Experience:

Five years of computer simulation experience. The experience shall include simulation of vehicle dynamics, seaway, electronic circuits, embedded computer systems, tactical software, closed loop servo systems and submarine control systems or shall include analog and digital system hardware and experience in software modeling and simulation. The experience shall also include specific technical project management experience in the design, development and testing of submarine simulations of the type represented by standard equations of motion.

(c) Systems Analyst

Minimum Education:

Bachelor's Degree in engineering, science or mathematics.

Minimum Experience:

Seven years of related technical experience. Five years of the experience shall include computer software implementation, statistical analysis, and developing mathematical models from engineering formulations. Additionally, the experience shall include environmental statistics, seakeeping performance evaluation, operational analysis of advanced vehicle control systems, and analysis and identification of advanced vehicle maneuvering criteria.

(d) Electronics Technician

Minimum Education:

High School diploma

Minimum Experience:

Three years of experience in electronics and electricity. Possess the basic computer skills and the ability to set up and operate various recording devices such as electronic signal and video recorders. Experience requirements shall include experience with electronic circuit diagrams. Possess skills in selecting components needed in circuits and hard wiring the circuits. Possess basic mechanical skills.

(e) Neural Network Engineer

Minimum Education:

Bachelor's Degree in engineering, or computer science.

Minimum Experience:

Seven years of neural network research and development experience. Experience shall include designing and developing artificial intelligence algorithms such as neural networks, fuzzy logic and data fusion methods for advanced diagnostic systems or ship control systems applications.

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(f) Computer Scientist

Minimum Education:

Bachelor's Degree in computer science, mathematics, science, or engineering.

Minimum Experience:

Four years of software development or information technology experience.

(g) Data Technician

Minimum Education:

High School diploma

Minimum Experience:

One year in technical work experience involving: data reduction, and skilled with IBM, IBM compatible operating systems for a personal computer. Possess ability to use Excel spreadsheets. Possess understanding of engineering units in both metric and English systems.

(h) Configuration Management

**Minimum Education:** Bachelor's Degree in computer science, or information technology.

Minimum Experience:

Seven years of experience in configuration management and software development or information technology. Possess and maintain all qualifications for certification in the Cyber Security Workforce (CSWF) as IAT Level I or greater IAW DOD 8570.01M.

(i) Computer Scientist Cyber Security Workforce (CSWF) Member IAT Level I

Minimum Education:

Bachelor's degree in computer science, mathematics, science, or engineering.

Minimum Experience:

Four years of system administration, patch management, desktop support and related information technology experience. Must be able to interface and communicate professionally to both a technical and non-technical user base. Possess and maintain all qualifications for certification in the Cyber Security Workforce (CSWF) as IAT Level I or greater IAW DOD 8570.01M.

(j) Cyber Security Workforce (CSWF) Member IAT Level II

Minimum Education:

Bachelor's Degree in Computer Science, Engineering or Mathematics

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Minimum Experience:

Six years of experience with system administration, patch management, desktop support and related information technology. Demonstrated knowledge and experience in all subject areas of Task Area 6, including being able to perform as a computer system engineer and a security solution architect. Must be able to interface and communicate professionally to both a technical and non-technical user base. Possess and maintain all qualifications for certification in the Cyber Security Workforce (CSWF) as IAT Level II or greater IAW DOD 8570.01M.

(k) Senior Geometry Software Development Mathematician/Engineer

**Minimum Education:** Bachelor's Degree in Computer Science, Mathematics or Engineering.

Minimum Experience:

Eight years of experience, along with demonstrated expertise in programming software necessary to design, and develop complex software that involves 3D geometry modeling and evaluation. Experience in designing, planning, and programming with the Leading Edge Architecture for Prototyping Systems (LEAPS) is required. Demonstrated Expertise is required in the following areas:

- 1) Advanced knowledge of None Uniform Rational B-Spline (NURBS) mathematics, and boundary representation (BREP) topologies
- 2) Advanced knowledge of C++
- 3) Advanced knowledge of object-oriented programming and modeling.
- 4) Knowledge of Numerical Analysis or Computational Methods
- 5) Knowledge of data structures
- 6) Knowledge of 3D graphics programming
- 7) Knowledge of geometric meshing and gridding

(l) Grid Generation Engineer

Minimum Education:

Master's Degree in Engineering, Math or Science.

Minimum Experience:

Ten years of experience in the generation of structured, overset, numerical grids for the evaluation of the fluid dynamics associated with vehicles and turbomachinery by Reynolds Averaged Navier-Stokes (RANS) solver. The experience must demonstrate the necessary capability of rapidly generating high quality grids in a single day for multiple turbomachinery configurations that lead to satisfactory RANS solutions without rework. Knowledge of fluid dynamics and turbulence models is required.

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#### 4.0 Government Furnished Materials/Information

4.1 In the cases where work is classified beyond Confidential, the Government will provide adequate accommodations for technical, fabrication and testing efforts. All other work will be done in the contractor's location unless specified in the Technical Instruction.

4.2 Government furnished information may be provided within 5 working days of the technical instruction providing specific tasking. Said materials will be returned to the Government if requested and as specified in the tasking.

#### 5.0 Place of Performance:

5.1 It is anticipated that approximately 80% of the contractor personnel will perform their duties using Government facilities at NSWC-Carderock in Bethesda, MD; the remaining 20% will utilize contractor facilities.

#### 6.0 Travel:

All travel under this effort must be requested of, or authorized by the COR, in writing or by electronic mail, and must show the appropriate order number, the number of people traveling, the number of days for the trip, the reason for the travel, and any high cost or unusual costs expected. The Contractor is not authorized to perform any travel that is not in conjunction with this effort. Travel costs shall be in accordance with FAR 31.205-46 and the Joint Travel Regulations. It is estimated that travel to offsite destinations will be required during performance. Locations will be determined by the government and are subject to change. Representative locations include:

- Groton, CT
- Bremerton, WA
- San Diego, CA

#### 7.0 Security:

a. DFARs Section 252.239-7001 Information Assurance Contractor Training and Certification is hereby invoked.

b. Award can only be made to an offeror possessing a facility clearance issued by the Defense Investigative Service in accordance with the attached DD Form 254.

c. The performance of this task will require access to government facilities. All key personnel shall hold or be capable of obtaining a SECRET clearance prior to being granted access to

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classified information up to the level of SECRET. All non-key personnel shall hold or be capable of obtaining a CONFIDENTIAL clearance prior to being granted access to classified information.

d. Contractor Personnel Identification-In the performance of the contract, contractor employees shall identify themselves as contractor personnel by introducing themselves or being introduced as contractor personnel and by distinguishing badges or other visible identification for meetings with Government personnel. Contractor personnel shall appropriately identify themselves as contractor employees in telephone conversations and formal and informal written correspondence.

8.0 Contracting Officer's Representative (COR):

### 9.0 Required Reporting

9.1 The contractor shall report contractor labor hours (including subcontractor labor hours) required for performance of services provided under this contract for the Naval Surface Warfare Center via a secure data collection site. Contracted services excluded from reporting are based on Product Service Codes (PSCs). The excluded PSCs are:

- (1) W, Lease/Rental of Equipment;
- (2) X, Lease/Rental of Facilities;
- (3) Y, Construction of Structures and Facilities;
- (4) S, Utilities ONLY;
- (5) V, Freight and Shipping ONLY.

The contractor is required to completely fill in all required data fields using the following web address <https://doncmra.nmci.navy.mil>.

Reporting inputs will be for the labor executed during the period of performance during each Government fiscal year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year. Contractors may direct questions to the help desk, linked at <https://doncmra.nmci.navy.mil>.

### 9.2 MAN-HOUR EXPENDITURE REPORTS IN ELECTRONIC COST REPORTING AND FINANCIAL TRACKING (eCRAFT) SYSTEM

Electronic Cost Reporting and Financial Tracking (eCRAFT)

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(a) The contractor agrees to upload the contractor's Funds and Man-hour Expenditure Reports in the Electronic Cost Reporting and Financial Tracking (eCRAFT) System and submit the Contract Status Report (CDRL A001) on the day and for the same timeframe the contractor submits an invoice into the Invoicing, Receipt, Acceptance, and Property Transfer (iRAPT) system. Compliance with this requirement is a material requirement of this contract. Failure to comply with this requirement may result in contract termination.

(b) The Contract Status Report indicates the progress of work and the status of the program and of all assigned tasks. It informs the Government of existing or potential problem areas. (c) The contractor's Funds and Man-hour Expenditure Report reports contractor expenditures for labor, materials, travel, subcontractor usage, and other contract charges.

(1) Access:

eCRAFT: Reports are uploaded through the eCRAFT System Periodic Report Utility (EPRU). The EPRU spreadsheet and user manual can be obtained at: <https://www.navsea.navy.mil/Home/Warfare-Centers/NUWC-Newport/Partnerships/Commercial-Contracts/Information-eCraft/> under eCRAFT information. The eCRAFT e-mail address for report submission is: Ecraft.nuwc.npt.fct@navy.mil. If you have problems uploading reports, please see the Frequently Asked Questions at the site address above.

(2) Submission and Acceptance/Rejection:

The contractor shall submit their reports on the same day and for the same timeframe the contractor submits an invoice in iRAPT. The amounts shall be the same. eCRAFT acceptance/rejection will be indicated by e-mail notification from eCRAFT.

## 10.0 SKILLS AND TRAINING

The Contractor shall provide capable personnel with qualifications, experience levels, security clearances, and necessary licenses, certifications, and training required by Federal, State, and Local laws and regulations. Training necessary to ensure that personnel performing under this task order maintain the knowledge and skills to successfully perform the required functions is the responsibility of the Contractor. Training necessary to maintain professional certification is the responsibility of the Contractor.

## 11.0 INFORMATION SECURITY AND COMPUTER SYSTEM USAGE

In accordance with U.S. Navy policy, any personnel, including the contractor, who utilizes DOD-owned systems, shall assume responsibility for adherence to restrictions regarding internet and e-mail usage. Navy policy prohibits racist, sexist, threatening, pornographic, personal business, subversive or politically partisan communications. All personnel, including the contractor, are accountable and must act accordingly. DOD computer systems are monitored to ensure that the use is authorized, to facilitate protection against unauthorized access, and to verify security procedures, survivability and operational security. During monitoring, information may be examined, recorded, copied, and used for authorized purposes. All information, including personal information, placed on or sent over a DOD system may be monitored. Use of a DOD system constitutes consent to monitoring. Unauthorized use may result in criminal prosecution. Evidence of unauthorized use collected during monitoring may be used as a basis for recommended administrative, criminal or adverse action.

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## 12.0 PORTABLE ELECTRONIC DEVICES (PEDs)

12.1 Non-government and/or personally owned portable electronic devices (PEDs) are prohibited in all NSWCCD buildings with the exception of personally owned cell phones which are authorized for use in spaces up to and including Controlled Access Areas. The Contractor shall ensure the onsite personnel remain compliant with current PED policy. NSWCCD instruction defines PEDS as the following: any electronic device designed to be easily transported, with the capability to store, record, receive or transmit text, images, video, or audio data in any format via any transmission medium. PEDS include, but are not limited to, pagers, laptops, radios, compact discs and cassette players/recorders. In addition, this includes removable storage media such as flash memory, memory sticks, multimedia cards and secure digital cards, micro-drive modules, ZIP drives, ZIP disks, recordable CDs, DVDs, MP3 players, iPADS, digital picture frames, electronic book readers, kindle, nook, cameras, external hard disk drives, and floppy diskettes.

12.2 PEDs belonging to an external organization shall not be connected to NSWCCD networks or infrastructure without prior approval from the NSWCCD Information Assurance Branch.

12.3 Personally owned hardware or software shall not be connected or introduced to any NSWCCD hardware, network or information system infrastructure.

## 13.0 ELECTRONIC SPILLAGES

(a) Electronic spillages (ES) are unacceptable and pose a risk to national security. An electronic spillage is defined as classified data placed on an information system (IS), media or hardcopy document possessing insufficient security controls to protect the data at the required classification level, thus posing a risk to national security (e.g., sensitive compartmented information (SCI) onto collateral, Secret onto Unclassified, etc). The contractor's performance as it relates to ES will be evaluated by the Government. ES reflects on the overall security posture of the Government and a lack of attention to detail with regard to the handling of classified information of IS security discipline and will be reflected in the contractor's performance rating. In the event that a contractor is determined to be responsible for an ES, all direct and indirect costs incurred by the Government for ES remediation will be charged to the contractor.

(b) NSWCCD Command Security will continue to be responsible for the corrective action plan in accordance with the security guidance reflected on the DOD Contract Security Classification Specification - DD254. Command Security will identify the contractor facility and contract number associated with all electronic spillages during the investigation that involve contractor support. Command Security will notify the Contracts Division with the contractor facility name and contract number, incident specifics and associated costs for



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cleanup. The Procuring Contracting Officer will be responsible to work with the Contractor Facility to capture the costs incurred during the spillage clean up. The Contractor is also responsible for taking Information Security Awareness training annually, via their Facility Security Officer (FSO), as part of the mandatory training requirements. If a spillage occurs additional training will be required to prevent recurrence.

#### 14.0 DIGITAL DELIVERY OF DATA

(a) Delivery by the Contractor to the Government of certain technical data and other information is now frequently required to be made in digital form rather than in hardcopy form. The method of delivery of such data and/or other information (i.e., in electronic, digital, paper hardcopy, or other form) shall not be deemed to affect in any way either the identity of the information (i.e., as “technical data” or “computer software”) or the Government’s and the Contractor’s respective rights therein.

(b) Whenever technical data and/or computer software deliverables required by this contract are to be delivered in digital form, any authorized, required, or permitted markings relating to the Government’s rights in and to such technical data and/or computer software must also be digitally included as part of the deliverable and on or in the same medium used to deliver the technical data and/or software. Such markings must be clearly associated with the corresponding technical data and/or computer software to which the markings relate and must be included in such a way that the marking(s) appear in human-readable form when the technical data and/or software is accessed and/or used. Such markings must also be applied in conspicuous human- readable form on a visible portion of any physical medium used to effect delivery of the technical data and/or computer software. Nothing in this paragraph shall replace or relieve the Contractor’s obligations with respect to requirements for marking technical data and/or computer software that are imposed by other applicable clauses such as, where applicable and without limitation, DFARS 252.227-7013 and/or DFARS 252.227-7014.

(c) Digital delivery means (such as but not limited to Internet tools, websites, shared networks, and the like) sometimes require, as a condition for access to and/or use of the means, an agreement by a user to certain terms, agreements, or other restrictions such as but not limited to “Terms of Use,” licenses, or other restrictions intended to be applicable to the information being delivered via the digital delivery means. The Contractor expressly acknowledges that, with respect to deliverables made according to this contract, no such terms, agreements, or other restrictions shall be applicable to or enforceable with respect to such deliverables unless such terms, agreements, or other restrictions expressly have been accepted in writing by the Procuring Contracting Officer; otherwise, the Government’s rights in and to such deliverables shall be governed exclusively by the terms of this task order.

#### 15.0 NON-PERSONAL SERVICES/INHERENTLY GOVERNMENTAL FUNCTIONS

(a) The Government will neither supervise contractor employees nor control the method by

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which the contractor performs the required tasks. The Government will not direct the hiring, dismissal or reassignment of contractor personnel. Under no circumstances shall the Government assign tasks to, or prepare work schedules for, individual contractor employees. It shall be the responsibility of the contractor to manage its employees and to guard against any actions that are of the nature of personal services or give the perception that personal services are being provided. If the contractor feels that any actions constitute, or are perceived to constitute personal services, it shall be the contractor's responsibility to notify the Contracting Officer immediately in accordance with the clause 52.243-7.

(b) Inherently-Governmental functions are not within the scope of this Task Order. Decisions relative to programs supported by the contractor shall be the sole responsibility of the Government. The contractor may be required to attend technical meetings for the Government; however, they are not, under any circumstances, authorized to represent the Government or give the appearance that they are doing so.

#### 16.0 CONTRACTOR IDENTIFICATION

The contractor shall be required to obtain identification badges from the Government for all contractor personnel requiring regular access to Government property. The identification badge shall be visible at all times while employees are on Government property. The contractor shall furnish all requested information required to facilitate issuance of identification badges and shall conform to applicable regulations concerning the use and possession of the badges. The contractor shall be responsible for ensuring that all identification badges issued to contractor employees are returned to the appropriate Security Office within 48 hours following completion of the Task Order, relocation or termination of an employee, and upon request by the Procuring Contracting Officer.

All contractor personnel shall identify their company affiliation when answering or making telephone calls and sending email and when attending meetings where Government personnel or representatives from another contractor personnel are present.

#### 17.0 CONTROL OF CONTRACTOR PERSONNEL

The contractor shall comply with the requirements of NAVSEA and NSWCCD instructions regarding performance in Government facilities. All persons engaged in work while on Government property shall be subject to search of their persons (no bodily search) and vehicles at any time by the Government, and shall report any known or suspected security violations to the appropriate Security Department. Assignment, transfer, and reassignment of contractor personnel shall be at the discretion of the contractor. However, when the Government directs, the contractor shall remove from contract performance any person who endangers life, property, or national security through improper conduct. All contractor personnel engaged in work while on Government property shall be subject to the Department of Defense Standards of Conduct.

#### 18.0 TERMINATION OF EMPLOYEES WITH NSWCCD BASE ACCESS

(a) The Contractor shall ensure that all employees who have a NSWCCD badge turn in the badge immediately upon termination of their employment under this order. The above requirement shall be made a part of the standard employee facility clearance procedures for all separated personnel. The Contractor shall advise NSWCCD Physical Security of all

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changes in their personnel requiring NSWCCD base access.

(b) For involuntarily separated personnel and those separated under adverse circumstances, the Contractor shall notify NSWCCD Physical Security in advance of the date, time, and location where the NSWCCD representative may retrieve the NSWCCD badge prior to the employee departing the Contractor's facility. In the event the employee is separated in his or her absence, the Contractor shall immediately notify NSWCCD Physical Security of the separation and make arrangements between the former employee and NSWCCD Physical Security for the return of the badge and removal of the sticker.

#### **HQ C-1-0001 ITEM(S) - DATA REQUIREMENTS (NAVSEA) (SEP 1992)**

The data to be furnished hereunder shall be prepared in accordance with the Contract Data Requirements List, DD Form 1423, Attachment (2) attached hereto.

#### **HQ C-2-0002 ACCESS TO PROPRIETARY DATA OR COMPUTER SOFTWARE (NAVSEA) (JUN 1994)**

(a) Performance under this contract may require that the Contractor have access to technical data, computer software, or other sensitive data of another party who asserts that such data or software is proprietary. If access to such data or software is required or to be provided, the Contractor shall enter into a written agreement with such party prior to gaining access to such data or software. The agreement shall address, at a minimum, (1) access to, and use of, the proprietary data or software exclusively for the purposes of performance of the work required by this contract, and (2) safeguards to protect such data or software from unauthorized use or disclosure for so long as the data or software remains proprietary. In addition, the agreement shall not impose any limitation upon the Government or its employees with respect to such data or software. A copy of the executed agreement shall be provided to the Task Order Contracting Officer. The Government may unilaterally modify the contract to list those third parties with which the Contractor has agreement(s).

(b) The Contractor agrees to: (1) indoctrinate its personnel who will have access to the data or software as to the restrictions under which access is granted; (2) not disclose the data or software to another party or other Contractor personnel except as authorized by the Task Order Contracting Officer; (3) not engage in any other action, venture, or employment wherein this information will be used, other than under this contract, in any manner inconsistent with the spirit and intent of this requirement; (4) not disclose the data or software to any other party, including, but not limited to, joint venturer, affiliate, successor, or assign of the Contractor; and (5) reproduce the restrictive stamp, marking, or legend on each use of the data or software whether in whole or in part.

(c) The restrictions on use and disclosure of the data and software described above also apply to such information received from the Government through any means to which the Contractor has access in the performance of this contract that contains proprietary or other restrictive markings.

(d) The Contractor agrees that it will promptly notify the Task Order Contracting Officer of any attempt by an individual, company, or Government representative not directly involved in the

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effort to be performed under this contract to gain access to such proprietary information. Such notification shall include the name and organization of the individual, company, or Government representative seeking access to such information.

(e) The Contractor shall include this requirement in subcontracts of any tier which involve access to information covered by paragraph (a), substituting "subcontractor" for "Contractor" where appropriate.

(f) Compliance with this requirement is a material requirement of this contract.

**HQ C-2-0011 COMPUTER SOFTWARE AND/OR COMPUTER DATABASE(S)  
DELIVERED TO AND/OR RECEIVED FROM THE GOVERNMENT (NAVSEA) (APR  
2004)**

(a) The Contractor agrees to test for viruses all computer software and/or computer databases, as defined in the clause entitled "RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION" (DFARS 252.227-7014), before delivery of that computer software or computer database in whatever media and on whatever system the software is delivered. The Contractor warrants that any such computer software and/or computer database will be free of viruses when delivered.

(b) The Contractor agrees to test any computer software and/or computer database(s) received from the Government for viruses prior to use under this contract.

(c) Unless otherwise agreed in writing, any license agreement governing the use of any computer software to be delivered as a result of this contract must be paid-up and perpetual, or so nearly perpetual as to allow the use of the computer software or computer data base with the equipment for which it is obtained, or any replacement equipment, for so long as such equipment is used. Otherwise the computer software or computer database does not meet the minimum functional requirements of this contract. In the event that there is any routine to disable the computer software or computer database after the software is developed for or delivered to the Government, that routine shall not disable the computer software or computer database until at least twenty-five calendar years after the delivery date of the affected computer software or computer database to the Government.

(d) No copy protection devices or systems shall be used in any computer software or computer database delivered under this contract to restrict or limit the Government from making copies. This does not prohibit license agreements from specifying the maximum amount of copies that can be made.

(e) Delivery by the Contractor to the Government of certain technical data and other data is now frequently required in digital form rather than as hard copy. Such delivery may cause confusion between data rights and computer software rights. It is agreed that, to the extent that any such data is computer software by virtue of its delivery in digital form, the Government will be licensed to use that digital-form data with exactly the same rights and limitations as if the data had been delivered as hard copy.

(f) Any limited rights legends or other allowed legends placed by a Contractor on technical

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data or other data delivered in digital form shall be digitally included on the same media as the digital-form data and must be associated with the corresponding digital-form technical data to which the legends apply to the extent possible. Such legends shall also be placed in human-readable form on a visible surface of the media carrying the digital-form data as delivered, to the extent possible.

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## SECTION D PACKAGING AND MARKING

### HQ D-2-0008 MARKING OF REPORTS (NAVSEA) (SEP 1990)

All reports delivered by the Contractor to the Government under this contract shall prominently show on the cover of the report:

- (1) name and business address of the Contractor
- (2) contract number
- (3) task order number
- (4) sponsor: (To be specified on each individual Technical Instruction)  
(Name of Individual Sponsor)  
(To be specified on each individual Technical Instruction)  
(Name of Requiring Activity)  
(To be specified on each individual Technical Instruction)  
(City and State)

COR:

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## **SECTION E INSPECTION AND ACCEPTANCE**

Inspection and Acceptance shall be performed by the Government at destination by the Contracting Officer's Representative.

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## SECTION F DELIVERABLES OR PERFORMANCE

The periods of performance for the following Items are as follows:

7000	9/24/2015 - 9/23/2016
7001	9/24/2015 - 9/23/2016
7002	9/24/2015 - 9/23/2016
7003	12/3/2015 - 9/23/2016
7004	2/12/2016 - 9/23/2016
7005	3/25/2016 - 9/23/2016
7006	4/18/2016 - 9/23/2016
7007	6/6/2016 - 9/23/2016
7008	6/6/2016 - 9/23/2016
7100	9/24/2016 - 9/23/2017
7101	9/24/2016 - 9/23/2017
7102	9/30/2016 - 9/23/2017
7103	9/30/2016 - 9/23/2017
7104	9/30/2016 - 9/23/2017
7105	9/30/2016 - 9/23/2017
7106	9/30/2016 - 9/23/2017
7107	9/30/2016 - 9/23/2017
7108	2/1/2017 - 9/23/2017
7109	6/6/2017 - 9/23/2017
7110	6/6/2017 - 9/23/2017
7111	8/8/2017 - 9/23/2017
7200	9/24/2017 - 9/23/2018
7201AA	9/24/2017 - 9/23/2018
7201AB	9/24/2017 - 9/23/2018
7201AC	9/24/2017 - 9/23/2018
7201AD	9/24/2017 - 9/23/2018
7201AE	9/24/2017 - 9/23/2018
7201AF	9/24/2017 - 9/23/2018
7201AG	9/24/2017 - 9/23/2018
7201AH	9/24/2017 - 9/23/2018
7201AJ	9/24/2017 - 9/23/2018
7201AK	9/24/2017 - 9/23/2018
7201AL	12/8/2017 - 9/23/2018
7201AM	12/8/2017 - 9/23/2018
7201AN	12/8/2017 - 9/23/2018
7201AP	12/8/2017 - 9/23/2018
7201AQ	12/28/2017 - 9/23/2018
7201AR	2/9/2018 - 9/23/2018
7201AS	2/9/2018 - 9/23/2018
7201AT	2/9/2018 - 9/23/2018
7201AU	2/9/2018 - 9/23/2018
7201AV	2/9/2018 - 9/23/2018
7201AW	3/5/2018 - 9/23/2018
7201AX	3/30/2018 - 9/23/2018
7201AY	5/31/2018 - 9/23/2018
7201AZ	5/31/2018 - 9/23/2018
7201BA	7/13/2018 - 9/23/2018



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7201BB	7/13/2018 - 9/23/2018
7201BC	7/13/2018 - 9/23/2018
7201BD	7/13/2018 - 9/23/2018
7300	9/24/2018 - 9/23/2019
7301AB	9/24/2018 - 9/23/2019
7301AC	9/24/2018 - 9/23/2019
7301AD	9/24/2018 - 9/23/2019
7301AE	9/24/2018 - 9/23/2019
7301AF	9/24/2018 - 9/23/2019
7301AG	9/24/2018 - 9/23/2019
7301AH	9/24/2018 - 9/23/2019
7301AJ	9/24/2018 - 9/23/2019
7301AK	9/24/2018 - 9/23/2019
7301AL	9/24/2018 - 9/23/2019
7301AM	9/24/2018 - 9/23/2019
7301AN	9/24/2018 - 9/23/2019
7301AP	9/24/2018 - 9/23/2019
7301AQ	9/24/2018 - 9/23/2019
7301AR	9/27/2018 - 9/23/2019
7301AS	12/6/2018 - 9/23/2019
7301AT	12/6/2018 - 9/23/2019
7301AU	12/13/2018 - 9/23/2019
7301AV	12/13/2018 - 9/23/2019
7301AW	1/11/2019 - 9/23/2019
7301AX	1/11/2019 - 9/23/2019
7301AY	1/11/2019 - 9/23/2019
7301AZ	1/11/2019 - 9/23/2019
7301BA	1/11/2019 - 9/23/2019
7301BB	1/11/2019 - 9/23/2019
7301BC	1/11/2019 - 9/23/2019
7301BD	1/11/2019 - 9/23/2019
7301BE	2/20/2019 - 9/23/2019
7301BF	2/20/2019 - 9/23/2019
7301BG	3/15/2019 - 9/23/2019
7301BH	3/15/2019 - 9/23/2019
7301BJ	3/15/2019 - 9/23/2019
7301BK	3/15/2019 - 9/23/2019
7301BL	4/25/2019 - 9/23/2019
9000	9/24/2015 - 9/23/2016
9001	9/24/2015 - 9/23/2016
9002	12/3/2015 - 9/23/2016
9003	3/25/2016 - 9/23/2016
9004	3/25/2016 - 9/23/2016
9005	4/18/2016 - 9/23/2016
9100	9/24/2016 - 9/23/2017
9101	9/24/2016 - 9/23/2017
9102	9/30/2016 - 9/23/2017
9103	9/30/2016 - 9/23/2017
9104	9/30/2016 - 9/23/2017
9105	2/1/2017 - 9/23/2017
9200	9/24/2017 - 9/23/2018

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9201AA	9/24/2017 - 9/23/2018
9201AB	9/24/2017 - 9/23/2018
9201AC	9/24/2017 - 9/23/2018
9201AD	9/24/2017 - 9/23/2018
9201AE	12/8/2017 - 9/23/2018
9201AF	12/7/2017 - 9/23/2018
9201AG	12/8/2017 - 9/23/2018
9201AH	9/13/2018 - 9/23/2018
9201AJ	2/9/2018 - 9/23/2018
9201AK	2/9/2018 - 9/23/2018
9201AL	2/9/2018 - 9/23/2018
9201AM	3/5/2018 - 9/23/2018
9201AN	7/13/2018 - 9/23/2018
9300	9/24/2018 - 9/23/2019
9301AB	9/24/2018 - 9/23/2019
9301AE	9/24/2018 - 9/23/2019
9301AF	9/24/2018 - 9/23/2019
9301AH	9/24/2018 - 9/23/2019
9301AJ	9/24/2018 - 9/23/2019
9301AK	9/24/2018 - 9/23/2019
9301AL	9/24/2018 - 9/23/2019
9301AM	9/24/2018 - 9/23/2019
9301AN	9/24/2018 - 9/23/2019
9301AP	9/24/2018 - 9/23/2019
9301AQ	9/24/2018 - 9/23/2019
9301AT	12/6/2018 - 9/23/2019
9301AU	12/13/2018 - 9/23/2019
9301AV	12/13/2018 - 9/23/2019
9301AW	1/11/2019 - 9/23/2019
9301AX	1/11/2019 - 9/23/2019
9301AY	1/11/2019 - 9/23/2019
9301BA	1/11/2019 - 9/23/2019
9301BG	3/15/2019 - 9/23/2019
9301BH	3/15/2019 - 9/23/2019
9301BJ	3/15/2019 - 9/23/2019

CLIN - DELIVERIES OR PERFORMANCE

DODAAC: N00167

COR:

Period of Performance:

**ITEM NO. QUANTITY WITHIN DAYS AFTER DATE OF TASK ORDER**

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7000 & 9000 ALL 12 MONTHS AFTER THE EFFECTIVE DATE  
OF THE TASK ORDER ASSUMING  
INCREMENTAL FUNDING IS PROVIDED

7100 & 9100 ALL 12 MONTHS AFTER THE EFFECTIVE DATE  
OF THE OPTION EXERCISED MODIFICATION  
ASSUMING INCREMENTAL FUNDING IS PROVIDED

7200 & 9200 ALL 12 MONTHS AFTER THE EFFECTIVE DATE  
OF THE OPTION EXERCISED MODIFICATION  
ASSUMING INCREMENTAL FUNDING IS PROVIDED

7300 & 9300 ALL 12 MONTHS AFTER THE EFFECTIVE DATE  
OF THE MODIFICATION EXERCISING THE TERM IF  
EARNED AND ASSUMING INCREMENTAL  
FUNDING PROVIDED

7400 & 9400 ALL 12 MONTHS AFTER THE EFFECTIVE DATE  
OF THE MODIFICATION EXERCISING THE TERM  
IF EARNED AND ASSUMING INCREMENTAL  
PROVIDED

(End of clause)

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## SECTION G CONTRACT ADMINISTRATION DATA

### G.1

#### Contracting Officer Representative:

### G.2 EARLY DISMISSAL AND CLOSURE OF GOVERNMENT FACILITIES

When a Government facility is closed and/or early dismissal of Federal employees is directed due to severe weather, security threat, or a facility related problem that prevents personnel from working, onsite contractor personnel regularly assigned to work at that facility should follow the same reporting and/or departure directions given to Government personnel. The contractor shall not direct charge to the contract for time off, but shall follow parent company policies regarding taking leave (administrative or other). Non-essential contractor personnel, who are not required to remain at or report to the facility, shall follow their parent company policy regarding whether they should go/stay home or report to another company facility. Subsequent to an early dismissal and during periods of inclement weather, onsite contractors should monitor radio and television announcements before departing for work to determine if the facility is closed or operating on a delayed arrival basis.

When Federal employees are excused from work due to a holiday or a special event (that is unrelated to severe weather, a security threat, or a facility related problem), on site contractors will continue working established work hours or take leave in accordance with parent company policy. Those contractors who take leave shall not direct charge the non-working hours to the task order. Contractors are responsible for predetermining and disclosing their charging practices for early dismissal, delayed openings, or closings in accordance with the FAR, applicable cost accounting standards, and company policy. Contractors shall follow their disclosed charging practices during the task order period of performance, and shall not follow any verbal directions to the contrary. The PCO will make the determination of cost allowability for time lost due to facility closure in accordance with FAR, applicable Cost Accounting Standards, and the Contractor's established accounting policy.

#### **252.204-0005 Line Item Specific: by Cancellation Date. (SEP 2009)**

The payment office shall make payment using the ACRN with the earliest cancellation date first, exhausting all funds in that ACRN before disbursing funds from the next. In the event there is more than one ACRN associated with the same cancellation date, the payment amount shall be disbursed from each ACRN with the same cancellation date in the same proportion as the amount of funding obligated for each ACRN with the same cancellation date.

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**252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (MAY 2013)**

(a) *Definitions.* As used in this clause—

“Department of Defense Activity Address Code (DoDAAC)” is a six position code that uniquely identifies a unit, activity, or organization.

“Document type” means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

“Local processing office (LPO)” is the office responsible for payment certification when payment certification is done external to the entitlement system.

(b) *Electronic invoicing.* The WAWF system is the method to electronically process vendor payment requests and receiving reports, as authorized by DFARS [252.232-7003](#), Electronic Submission of Payment Requests and Receiving Reports.

(c) *WAWF access.* To access WAWF, the Contractor shall—

(1) Have a designated electronic business point of contact in the Central Contractor Registration at <https://www.acquisition.gov>; and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this web site.

(d) *WAWF training.* The Contractor should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the “Web Based Training” link on the WAWF home page at <https://wawf.eb.mil/>

(e) *WAWF methods of document submission.* Document submissions may be via web entry, Electronic Data Interchange, or File Transfer Protocol.

(f) *WAWF payment instructions.* The Contractor must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order:

(1) *Document type.* The Contractor shall use the following document type(s).

Cost Voucher

(2) *Inspection/acceptance location.* The Contractor shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer.

Destination

(3) *Document routing.* The Contractor shall use the information in the Routing Data Table below only to fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

Routing Data Table\*

<i>Field Name in WAWF</i>	<i>Data to be entered in WAWF</i>
Pay Official DoDAAC	HQ0338
Issue By DoDAAC	N00167

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Admin DoDAAC	S2101A
Inspect By DoDAAC	N00167
Ship To Code	N00167
Service Approver (DoDAAC)	N00167
DCAA Auditor DoDAAC	HAA471

(4) *Payment request and supporting documentation.* The Contractor shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

(5) *WAWF email notifications.* The Contractor shall enter the e-mail address identified below in the “Send Additional Email Notifications” field of WAWF once a document is submitted in the system.

(g) *WAWF point of contact.*

(1) The Contractor may obtain clarification regarding invoicing in WAWF from the following contracting activity’s WAWF point of contact.

N00167 –  
Both UICs -

(2) For technical WAWF help, contact the WAWF helpdesk at 866-618-5988.

(End of clause)

**HQ G-2-0009, Supplemental Instructions Regarding Electronic Invoicing (NAVSEA) (SEP 2012)**

(a) The Contractor agrees to segregate costs incurred under this contract/task order (TO), as applicable, at the lowest level of performance, either at the technical instruction (TI), sub line item number (SLIN), or contract line item number (CLIN) level, rather than on a total contract/TO basis, and to submit invoices reflecting costs incurred at that level. Supporting documentation in Wide Area Workflow (WAWF) for invoices shall include summaries of work charged during the period covered as well as overall cumulative summaries by individual labor categories, rates, and hours (both straight time and overtime) invoiced; as well as, a cost breakdown of other direct costs (ODCs), materials, and travel, by TI, SLIN, or CLIN level. For other than firm fixed price subcontractors, subcontractors are also required to provide labor categories, rates, and hours (both straight time and overtime) invoiced; as well as, a cost breakdown of ODCs, materials, and travel invoiced. Supporting documentation may be encrypted before submission to the prime contractor for WAWF invoice submittal. Subcontractors may email encryption code information directly to the Contracting Officer (CO) and Contracting Officer Representative (COR). Should the subcontractor lack encryption capability, the subcontractor may also email detailed supporting cost information directly to the CO and COR; or other method as agreed to by the CO.

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(b) Contractors submitting payment requests and receiving reports to WAWF using either Electronic Data Interchange (EDI) or Secure File Transfer Protocol (SFTP) shall separately send an email notification to the COR and CO on the same date they submit the invoice in WAWF. No payments shall be due if the contractor does not provide the COR and CO email notification as required herein.

Accounting Data

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## SECTION H SPECIAL CONTRACT REQUIREMENTS

### **5252.232-9104 ALLOTMENT OF FUNDS (JAN 2008)**

(a) This contract is incrementally funded with respect to both cost and fee. The amount(s) presently available and allotted to this contract for payment of fee for incrementally funded contract line item number/contract sub-line item number (CLIN/SLIN), subject to the clause entitled "FIXED FEE" (FAR 52.216-8) or "INCENTIVE FEE" (FAR 52.216-10), as appropriate, is specified below. The amount(s) presently available and allotted to this contract for payment of cost for incrementally funded CLINs/SLINs is set forth below. As provided in the clause of this contract entitled "LIMITATION OF FUNDS" (FAR 52.232-22), the CLINs/SLINs covered thereby, and the period of performance for which it is estimated the allotted amount(s) will cover are as follows:

<u>ITEM(S)</u>	<u>ALLOTED TO COST</u>	<u>ALLOTED TO FEE</u>	<u>ESTIMATED PERIOD OF PERFORMANCE</u>
All			See Section F

(b) The parties contemplate that the Government will allot additional amounts to this contract from time to time for the incrementally funded CLINs/SLINs by unilateral contract modification, and any such modification shall state separately the amount(s) allotted for cost, the amount(s) allotted for fee, the CLINs/SLINs covered thereby, and the period of performance which the amount(s) are expected to cover.

(c) CLINs/SLINs are fully funded and performance under these CLINs/SLINs is subject to the clause of this contract entitled "LIMITATION OF COST" (FAR 52.232-20).

(d) The Contractor shall segregate costs for the performance of incrementally funded CLINs/SLINs from the costs of performance of fully funded CLINs/SLINs.

(End of Text)

### **5252.242-9115 TECHNICAL INSTRUCTIONS (APR 1999)**

(a) Performance of the work hereunder may be subject to written technical instructions signed by the Contracting Officer's Representative specified in Section G of this contract. As used herein, technical instructions are defined to include the following:

(1) Directions to the Contractor which suggest pursuit of certain lines of inquiry, shiftwork emphasis, fill in details or otherwise serve to accomplish the contractual statement of work.

(2) Guidelines to the Contractor which assist in the interpretation of drawings, specifications or technical portions of work description.

(b) Technical instructions must be within the general scope of work stated in the contract. Technical instructions may not be used to: (1) assign additional work under the contract; (2) direct a change as defined in the "CHANGES" clause of this contract; (3) increase or decrease the contract

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price or estimated contract amount (including fee), as applicable, the level of effort, or the time required for contract performance; or (4) change any of the terms, conditions or specifications of the contract.

(c) If, in the opinion of the Contractor, any technical instruction calls for effort outside the scope of the contract or is inconsistent with this requirement, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after the receipt of any such instruction. The Contractor shall not proceed with the work affected by the technical instruction unless and until the Contractor is notified by the Contracting Officer that the technical instruction is within the scope of this contract.

(d) Nothing in the foregoing paragraph shall be construed to excuse the Contractor from performing that portion of the contractual work statement which is not affected by the disputed technical instruction.

**(End of Text)**

**CAR H11 – CONTRACTOR PERSONNEL SECURITY REQUIREMENTS (MAR 2014)**

a. In accordance with SECNAV M-5510.30 Chapters 5 and 6, all Contractor personnel that require access to Department of Navy (DON) information systems and/or work on-site are designated Non-Critical Sensitive/IT-II positions, which require an open investigation or favorable adjudicated National Agency Check (NACLC) by the Industrial Security Clearance Office (DISCO). Investigations should be completed using the SF- 86 Form and the SF-87 finger print card. An interim clearance can be granted by the company Security Officer and recorded in the Joint Personnel Adjudication System (JPAS). An open or closed investigation with a favorable adjudication is required prior to issuance of a badge providing access to NSWCCD sites and buildings. If an unfavorable adjudication is determined by DISCO all access will be terminated. For Common Access Card (CAC), you must have a favorably adjudicated investigation, or a final security clearance. A CAC will not be issued to contractors who have an interim security clearance.

b. Within 30 days after contract award, the Contractor shall submit a list of all Contractor personnel, including subcontractor employees, who will have access to DON information systems and/or work on-site at one of the NSWCCD sites. The Contractor shall e-mail [acquisition.nswccd.fct@navy.mil](mailto:acquisition.nswccd.fct@navy.mil) to obtain the excel file that outlines the required format and content of the list. The Contractor will provide each employee's first name, last name, contract number, the NSWCCD technical code, work location, whether or not the employee has a CAC card and/or swipe card, the systems the employee can access (i.e., NMCI, RDT&E), and the name of the Contractor's local point of contact, phone number and email address. The excel file shall be submitted via email to [acquisition.nswccd.fct@navy.mil](mailto:acquisition.nswccd.fct@navy.mil) and the Contracting Officer's Representative (COR) or Task Order Manager (TOM). Throughout the period of performance of the contract, the Contractor shall immediately provide an updated spreadsheet to [acquisition.nswccd.fct@navy.mil](mailto:acquisition.nswccd.fct@navy.mil) and the COR/TOM when any Contractor personnel changes occur.

(end of clause)

**H-5 Task Order Process.**

Ombudsman Description.

The Local Warfare Center Site Deputy for Small Business has been designated as the NAVSEA and related Program Executive Offices Ombudsman for this contract. The NSWCCD Ombudsman will review complaints from the contractors and ensure that all contractors are afforded a fair opportunity to be considered, consistent with the procedures in the contract. Complaints to the NSWCCD Ombudsman must be forwarded to:

**5252.216-9122 LEVEL OF EFFORT – ALTERNATE 1 (MAY 2010)**

(a) The Contractor agrees to provide the total level of effort specified below in performance of the work described in Sections B and C of this task order. The total level of effort for the performance of this task order shall be man-hours of direct labor, including subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort. **The following table is inclusive of all hours including options and award terms:**

CLIN	Total Man Hours	Compensated	Uncompensated
7000			
7100			
7200			
7300			
7400			

(b) Of the total man-hours of direct labor set forth above, it is estimated that man-hours are uncompensated effort. Uncompensated effort is defined as hours provided by personnel in excess of 40 hours per week without additional compensation for such excess work. Total Times Accounting (TTA) efforts are included in this definition. All other effort is defined as compensated effort. If no effort is indicated in the first sentence of this paragraph, uncompensated effort performed by the Contractor shall not be counted in fulfillment of the level of effort obligations under this contract.

(c) Effort performed in fulfilling the total level of effort obligations specified above shall only include effort performed in direct support of this contract and shall not include time and effort expended on such things as local travel to and from an employee's usual work location, uncompensated effort while on travel status, truncated lunch periods, work (actual or inferred) at an employee's residence or other non-work locations (except as provided in paragraph (i) below), or other time and effort which does not have a specific and direct contribution to the tasks described in Sections B and C.

(d) The level of effort for this contract shall be expended at an average rate of

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approximately hours per week. It is understood and agreed that the rate of man-hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total man-hours of effort prior to the expiration of the term hereof, except as provided in the following paragraph.

(e) If, during the term hereof, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total man-hours of effort specified above would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fee together with an offer, setting forth a proposed level of effort, cost breakdown, and proposed fee, for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(f) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total man-hours of effort specified in paragraph (a) above would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(g) The Contractor shall provide and maintain an accounting system, acceptable to the Administrative Contracting Officer and the Defense Contract Audit Agency (DCAA), which collects costs incurred and effort (compensated and uncompensated, if any) provided in fulfillment of the level of effort obligations of this contract. The Contractor shall indicate on each invoice the total level of effort claimed during the period covered by the invoice, separately identifying compensated effort and uncompensated effort, if any.

(h) Within 45 days after completion of the work under each separately identified period of performance hereunder, the Contractor shall submit the following information in writing to the Contracting Officer with copies to the cognizant Contract Administration Office and to the DCAA office to which vouchers are submitted: (1) the total number of man-hours of direct labor expended during the applicable period; (2) a breakdown of this total showing the number of man-hours expended in each direct labor classification and associated direct and indirect costs; (3) a breakdown of other costs incurred; and (4) the Contractor's estimate of the total allowable cost incurred under the contract for the period. Within 45 days after completion of the work under the contract, the Contractor shall submit, in addition, in the case of a cost underrun; (5) the amount by which the estimated cost of this contract may be reduced to recover excess funds. All submissions shall include subcontractor information.

(i) Unless the Contracting Officer determines that alternative worksite arrangements are detrimental to contract performance, the Contractor may perform up to 10% of the hours at an alternative worksite, provided the Contractor has a company-approved alternative worksite plan.

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The primary worksite is the traditional “main office” worksite. An alternative worksite means an employee’s residence or a telecommuting center. A telecommuting center is a geographically convenient office setting as an alternative to an employee’s main office. The Government reserves the right to review the Contractor’s alternative worksite plan. In the event performance becomes unacceptable, the Contractor will be prohibited from counting the hours performed at the alternative worksite in fulfilling the total level of effort obligations of the contract. Regardless of work location, all contract terms and conditions, including security requirements and labor laws, remain in effect. The Government shall not incur any additional cost nor provide additional equipment for contract performance as a result of the Contractor’s election to implement an alternative worksite plan.

(j) Notwithstanding any of the provisions in the above paragraphs and subject to the **LIMITATION OF FUNDS** or **LIMITATION OF COST** clauses, as applicable, the period of performance may be extended and the estimated cost may be increased in order to permit the Contractor to provide all of the man-hours listed in paragraph (a) above. The contractor shall continue to be paid fee for each man-hour performed in accordance with the terms of the contract.

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## SECTION I CONTRACT CLAUSES

### 52.216-10 INCENTIVE FEE (JUN 2011)

(a) *General.* The Government shall pay the Contractor for performing this contract a fee determined as provided in this contract.

(b) *Target cost and target fee.* The target cost and target fee specified in the Schedule are subject to adjustment if the contract is modified in accordance with paragraph (d) of this clause.

(1) "Target cost," as used in this contract, means the estimated cost of this contract as initially negotiated, adjusted in accordance with paragraph (d) of this clause.

(2) "Target fee," as used in this contract, means the fee initially negotiated on the assumption that this contract would be performed for a cost equal to the estimated cost initially negotiated, adjusted in accordance with paragraph (d) of this clause.

(c) *Withholding of payment.*

(1) Normally, the Government shall pay the fee to the Contractor as specified in the Schedule. However, when the Contracting Officer considers that performance or cost indicates that the Contractor will not achieve target, the Government shall pay on the basis of an appropriate lesser fee. When the Contractor demonstrates that performance or cost clearly indicates that the Contractor will earn a fee significantly above the target fee, the Government may, at the sole discretion of the Contracting Officer, pay on the basis of an appropriate higher fee.

(2) Payment of the incentive fee shall be made as specified in the Schedule; provided that the Contracting Officer withholds a reserve not to exceed 15 percent of the total incentive fee or \$100,000, whichever is less, to protect the Government's interest. The Contracting Officer shall release 75 percent of all fee withholds under this contract after receipt of an adequate certified final indirect cost rate proposal covering the year of physical completion of this contract, provided the Contractor has satisfied all other contract terms and conditions, including the submission of the final patent and royalty reports, and is not delinquent in submitting final vouchers on prior years' settlements. The Contracting Officer may release up to 90 percent of the fee withholds under this contract based on the Contractor's past performance related to the submission and settlement of final indirect cost rate proposals.

(d) *Equitable adjustments.* When the work under this contract is increased or decreased by a modification to this contract or when any equitable adjustment in the target cost is authorized under any other clause, equitable adjustments in the target cost, target fee, minimum fee, and maximum fee, as appropriate, shall be stated in a supplemental agreement to this contract.

(e) *Fee payable.*

(1) The fee payable under this contract shall be the target fee increased by for every dollar that the total allowable cost is less than the target cost or decreased by for every dollar that the total allowable cost exceeds the target cost. In no event shall the fee be greater than or less than of the target cost.

(2) The fee shall be subject to adjustment, to the extent provided in paragraph (d) of this clause, and within the minimum and maximum fee limitations in paragraph (e)(1) of this clause, when the total allowable cost is increased or decreased as a consequence of—

(i) Payments made under assignments; or

(ii) Claims excepted from the release as required by paragraph (h)(2) of the Allowable Cost and Payment clause.

(3) If this contract is terminated in its entirety, the portion of the target fee payable shall not be subject to an increase or decrease as provided in this paragraph. The termination shall be accomplished in accordance with other applicable clauses of this contract.

(4) For the purpose of fee adjustment, "total allowable cost" shall not include allowable costs arising out of—

(i) Any of the causes covered by the Excusable Delays clause to the extent that they are beyond the control and without the fault or negligence of the Contractor or any subcontractor;

(ii) The taking effect, after negotiating the target cost, of a statute, court decision, written ruling, or regulation that results in the Contractor's being required to pay or bear the burden of any tax or duty or rate increase in a tax or duty;

(iii) Any direct cost attributed to the Contractor's involvement in litigation as required by

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the Contracting Officer pursuant to a clause of this contract, including furnishing evidence and information requested pursuant to the Notice and Assistance Regarding Patent and Copyright Infringement clause;

(iv) The purchase and maintenance of additional insurance not in the target cost and required by the Contracting Officer, or claims for reimbursement for liabilities to third persons pursuant to the Insurance Liability to Third Persons clause;

(v) Any claim, loss, or damage resulting from a risk for which the Contractor has been relieved of liability by the Government Property clause; or

(vi) Any claim, loss, or damage resulting from a risk defined in the contract as unusually hazardous or as a nuclear risk and against which the Government has expressly agreed to indemnify the Contractor.

(5) All other allowable costs are included in "total allowable cost" for fee adjustment in accordance with this paragraph (e), unless otherwise specifically provided in this contract.

(f) *Contract modification.* The total allowable cost and the adjusted fee determined as provided in this clause shall be evidenced by a modification to this contract signed by the Contractor and Contracting Officer.

(g) *Inconsistencies.* In the event of any language inconsistencies between this clause and provisioning documents or Government options under this contract, compensation for spare parts or other supplies and services ordered under such documents shall be determined in accordance with this clause. (End of clause)

**52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)  
(NAVSEA VARIATION) (SEP 2009)**

(a) The Government may extend the term of this contract by written notice(s) to the Contractor within the periods specified below. If more than one option exists the Government has the right to unilaterally exercise any such option whether or not it has exercised other options.

ITEM(s)	Latest Option Exercise Date
7100, 9100	No later than 12 months after the Task Order period of performance start date.
7200, 9200	No later than 24 months after the Task Order period of performance start date.
7300, 9300	No later than 36 months after the Task Order period of performance start date.
7400, 9400	No later than 48 months after the Task Order period of performance start date.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any option(s) under this clause, shall not exceed five (5) years, however, in accordance with paragraph (g) of the requirement of this contract entitled "LEVEL OF EFFORT" (NAVSEA 5252.216-9122), if the total manhours delineated in paragraph (a) of the LEVEL OF EFFORT requirement, have not been expended within the period specified above, the Government may require the Contractor to continue to perform the work until the total number of manhours specified in paragraph (a) of the aforementioned requirement have been expended.

(End of clause)

**52.222-32 Payment for Overtime Premiums (July 1990)**

(a) The use of overtime is authorized under this contract if the overtime premium does not exceed \$0 or the overtime premium is paid for work—

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(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall—

(1) Identify the work unit; *e.g.*, department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

(End of clause)

#### **52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (DEC 2010)**

(a) *Definitions.* As used in this clause—

“Commercial item” has the meaning contained Federal Acquisition Regulation 2.101, Definitions.

“Subcontract” includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)

(1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (Apr 2010) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)), if the subcontract exceeds \$5,000,000 and has a performance period of more than 120 days. In altering this clause to identify the appropriate



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parties, all disclosures of violation of the civil False Claims Act or of Federal criminal law shall be directed to the agency Office of the Inspector General, with a copy to the Contracting Officer.

(ii) 52.203-15, Whistleblower Protections Under the American Recovery and Reinvestment Act of 2009 (Jun 2010) (Section 1553 of Pub. L. 111-5), if the subcontract is funded under the Recovery Act.

(iii) 52.219-8, Utilization of Small Business Concerns (Dec 2010) (15 U.S.C. 637(d)(2) and (3)), if the subcontract offers further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$650,000 (\$1.5 million for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iv) 52.222-26, Equal Opportunity (Mar 2007) (E.O. 11246).

(v) 52.222-35, Equal Opportunity for Veterans (Sep 2010) (38 U.S.C. 4212(a));

(vi) 52.222-36, Affirmative Action for Workers with Disabilities (Oct 2010) (29 U.S.C. 793).

(vii) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496), if flow down is required in accordance with paragraph (f) of FAR clause 52.222-40.

(viii) 52.222-50, Combating Trafficking in Persons (Feb 2009) (22 U.S.C. 7104(g)).

(ix) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. App. 1241 and 10 U.S.C. 2631), if flow down is required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

(End of Clause)

#### **252.204-7000 DISCLOSURE OF INFORMATION (DEC 1991)**

(a) The Contractor shall not release to anyone outside the Contractor's organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless—

(1) The Contracting Officer has given prior written approval; or

(2) The information is otherwise in the public domain before the date of release.

(b) Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least 45 days before the proposed date for release.

(c) The Contractor agrees to include a similar requirement in each subcontract under this

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contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.

(End of Clause)

## 252.204-7012 SAFEGUARDING OF UNCLASSIFIED CONTROLLED TECHNICAL INFORMATION (NOV 2013)

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

"Adequate security" means protective measures that are commensurate with the consequences and probability of loss, misuse, or unauthorized access to, or modification of information.

"Attribution information" means information that identifies the Contractor, whether directly or indirectly, by the grouping of information that can be traced back to the Contractor (e.g., program description or facility locations).

"Compromise" means disclosure of information to unauthorized persons, or a violation of the security policy of a system, in which unauthorized intentional or unintentional disclosure, modification, destruction, or loss of an object, or the copying of information to unauthorized media may have occurred.

"Contractor information system" means an information system belonging to, or operated by or for, the Contractor.

"Controlled technical information" means technical information with military or space application that is subject to controls on the access, use, reproduction, modification, performance, display, release, disclosure, or dissemination. Controlled technical information is to be marked with one of the distribution statements B-through-F, in accordance with DoD Instruction 5230.24, Distribution Statements on Technical Documents. The term does not include information that is lawfully publicly available without restrictions.

"Cyber incident" means actions taken through the use of computer networks that result in an actual or potentially adverse effect on an information system and/or the information residing therein.

"Exfiltration" means any unauthorized release of data from within an information system. This includes copying the data through covert network channels or the copying of data to unauthorized media. "Media" means physical devices or writing surfaces including, but is not limited to, magnetic tapes, optical disks, magnetic disks, large-scale integration memory chips, and printouts onto which information is recorded, stored, or printed within any information system.

"Technical information" means technical data or computer software, as those terms are defined in the clause at DFARS 252.227-7013, Rights in Technical Data - Non Commercial Items, regardless of whether or not the clause is incorporated in this solicitation or contract. Examples of technical information include research and engineering data, engineering drawings, and associated lists, specifications, standards, process sheets, manuals, technical reports, technical orders, catalog-item identifications, data sets, studies and analyses and related information, and computer software executable code and source code.

(b) Safeguarding requirements and procedures for unclassified controlled technical information. The Contractor shall provide adequate security to safeguard unclassified controlled technical information from compromise. To provide adequate security, the Contractor shall-

(1) Implement information systems security in its project, enterprise, or company-wide unclassified information technology system(s) that may have unclassified controlled technical information resident on or transiting through them. The information systems security program

shall implement, at a minimum-

(i) The specified National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53 security controls identified in the following table; or

(ii) If a NIST control is not implemented, the Contractor shall submit to the Contracting Officer a written explanation of how -

(A) The required security control identified in the following table is not applicable; or

(B) An alternative control or protective measure is used to achieve equivalent protection.

(2) Apply other information systems security requirements when the Contractor reasonably determines that information system security measures, in addition to those identified in paragraph (b)(1) of this clause, may be required to provide adequate security in a dynamic environment based on an assessed risk or vulnerability.

Table 1 -- Minimum Security Controls for Safeguarding

Minimum required security controls for unclassified controlled technical information requiring safeguarding in accordance with paragraph (d) of this clause. (A description of the security controls is in the NIST SP 800-53, "Security and Privacy Controls for Federal Information Systems and Organizations" (<http://csrc.nist.gov/publications/PubsSPs.html>)).

Access Control    Audit & Accountability

Access Control	Audit & Accountability	Identification & Authentication	Media Protection	System & Comm Protection
AC-2	AU-2	IA-2	MP-4	SC-2
AC-3(4)	AU-3	IA-4	MP-6	SC-4
AC-4	AU-6(1)	IA-5(1)		SC-7
AC-6	AU-7		Physical & Environmental Protection	SC-8(1)
AC-7	AU-8	Incident Response	PE-2	SC-13
AC-11(1)	AU-9	IR-2	PE-3	
AC-17(2)		IR-4	PE-5	SC-15
AC-18(1)	Configuration Management	IR-5		SC-28
AC-19	CM-2	IR-6	Program Management	
AC-20(1)	CM-6		PM-10	System & Information Integrity
AC-20(2)	CM-7	Maintenance		SI-2
AC-22	CM-8	MA-4(6)	Risk Assessment	SI-3
		MA-5	RA-5	SI-4
Awareness & Training	Contingency Planning	MA-6		

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AT-2 CP-9

Legend:

AC: Access Control MA: Maintenance

AT: Awareness and Training MP: Media Protection

AU: Auditing and Accountability PE: Physical & Environmental Protection

CM: Configuration Management PM: Program Management

CP: Contingency Planning RA: Risk Assessment

IA: Identification and Authentication SC: System & Communications Protection

IR: Incident Response SI: System & Information Integrity

(c) Other requirements. This clause does not relieve the Contractor of the requirements specified by applicable statutes or other Federal and DoD safeguarding requirements for Controlled Unclassified Information (CUI) as established by Executive Order 13556, as well as regulations and guidance established pursuant thereto.

(d) Cyber incident and compromise reporting.

(1) Reporting requirement. The Contractor shall report as much of the following information as can be obtained to the Department of Defense via (<http://dibnet.dod.mil/>) within 72 hours of discovery of any cyber incident, as described in paragraph (d)(2) of this clause, that affects unclassified controlled technical information resident on or transiting through the Contractor's unclassified information systems:

(i) Data Universal Numbering System (DUNS).

(ii) Contract numbers affected unless all contracts by the company are affected.

(iii) Facility CAGE code if the location of the event is different than the prime Contractor location.

(iv) Point of contact if different than the POC recorded in the System for Award Management (address, position, telephone, email).

(v) Contracting Officer point of contact (address, position, telephone, email).

(vi) Contract clearance level.

(vii) Name of subcontractor and CAGE code if this was an incident on a Sub-contractor network.

(viii) DoD programs, platforms or systems involved.

(ix) Location(s) of compromise.

(x) Date incident discovered.

(xi) Type of compromise (e.g., unauthorized access, inadvertent release, other).

(xii) Description of technical information compromised.

(xiii) Any additional information relevant to the information compromise.

(2) Reportable cyber incidents. Reportable cyber incidents include the following:

(i) A cyber incident involving possible exfiltration, manipulation, or other loss or compromise of any unclassified controlled technical information resident on or transiting through Contractor's, or its subcontractors', unclassified information systems.

(ii) Any other activities not included in paragraph (d)(2)(i) of this clause that allow unauthorized access to the Contractor's unclassified information system on which unclassified controlled technical information is resident on or transiting.

(3) Other reporting requirements. This reporting in no way abrogates the Contractor's responsibility for additional safeguarding any cyber incident reporting requirements pertaining to

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its unclassified information systems under other clauses that may apply to its contract, or as a result of other U.S. Government legislative and regulatory requirements that may apply (e.g., as cited in paragraph (c) of this clause).

(4) Contractor actions to support DoD damage assessment. In response to the reported cyber incident, the Contractor shall --

(i) Conduct further review of its unclassified network for evidence of compromise resulting from a cyber incident to include, but is not limited to, identifying compromised computers, servers, specific data and users accounts. This includes analyzing information systems that were part of the compromise, as well as other information systems on the network that were accessed as a result of the compromise.

(ii) Review the data accessed during the cyber incident to identify specific unclassified controlled technical information associated with DoD programs, systems or contracts, including military programs, systems and technology; and

(iii) Preserve and protect images of known affected information systems and all relevant monitoring/packet capture data for at least 90 days from the cyber incident to allow DoD to request information or decline interest.

(5) DoD damage assessment activities. If DoD elects to conduct a damage assessment, the Contracting Officer will request that the Contractor point of contact identified in the incident report at (d)(1) of this clause provide all of the damage assessment information gathered in accordance with paragraph (d)(4) of this clause. The Contractor shall comply with damage assessment information requests. The requirement to share files and images exists unless there are legal restrictions that limit a company's ability to share digital media. The Contractor shall inform the Contracting Officer of the source, nature, and prescription of such limitations and the authority responsible.

(e) Protection of reported information. Except to the extent that such information is lawfully publicly available without restrictions, the Government will protect information reported or otherwise provided to DoD under this clause in accordance with applicable statutes, regulations, and policies. The Contractor shall identify and mark attribution information reported or otherwise provided to the DoD. The Government may use information, including attribution information and disclose it only to authorized persons for purposes and activities consistent with this clause.

(f) Nothing in this clause limits the Government's ability to conduct law enforcement or counterintelligence activities, or other lawful activities in the interest of homeland security and national security. The results of the activities described in this clause may be used to support an investigation and prosecution of any person or entity, including those attempting to infiltrate or compromise information on a contractor information system in violation of any statute.

(g) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (g), in all subcontracts, including subcontracts for commercial items.

(End of Clause)

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## **SECTION J LIST OF ATTACHMENTS**

Attachment 1: DD254, Contract Security Classification Specification, Revision 1 dated 3 August 2016

Attachment 2: CDRLs

Attachment 3: Incurred Cost Report

Attachment 4: Burn rate analysis

Attachment 5: Award Term Plan

Attachment 6: Quality Assurance Surveillance Plan (QASP)

Attachment 7: DD254 Revision 1

Attachment 8: DD254 Revision 2