UNCLASSIFIED

Department of Defense
Fiscal Year (FY) 2024 Budget Estimates

March 2023

Navy

Justification Book Volume 1 of 5

Other Procurement, Navy

Budget Activity 01

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Other Procurement, Navy

For procurement, production, and modernization of support equipment and materials not otherwise provided for, Navy ordnance (except ordnance for new aircraft, new ships, and ships authorized for conversion); the purchase of passenger motor vehicles for replacement only; expansion of public and private plants, including the land necessary therefore, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway, $14,535,257,000, to remain available for obligation until September 30, 2026, of which $1,027,000 shall be available for the Navy Reserve and the Marine Corps Reserve: Provided, That such funds are also available for the maintenance, repair, and modernization of ships.

Fiscal Year (FY) 2024 Overseas Operations Costs funding accounted for in the Base budget total [$46,435,000].

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Department of the Navy
FY 2024 President's Budget
Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N BA Summary

(Dollars in Thousands)

Appropriation: **Other Procurement, Navy**	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
Budget Activity					
01. Ships support equipment	4,267,668	4,714,192		4,714,192	5,776,998
02. Communications and electronics equipment	3,281,303	3,299,809		3,299,809	3,967,071
03. Aviation support equipment	737,556	957,476		957,476	924,487
04. Ordnance support equipment	1,043,088	1,209,869		1,209,869	1,256,530
05. Civil engineering support equipment	156,510	159,226		159,226	183,019
06. Supply support equipment	690,832	651,632		651,632	699,764
07. Personnel and command support equipment	502,251	564,073	2,170	566,243	611,488
08. Spares and repair parts	445,621	582,313		582,313	1,115,900
Total Other Procurement, Navy	**11,124,829**	**12,138,590**	**2,170**	**12,140,760**	**14,535,257**

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 01: Ships support equipment									
Ship Propulsion Equipment									
1	Surface Power Equipment	A	U	0	41,414	0	46,478		
Generators									
2	Surface Combatant HM&E	A	U	0	78,054	0	74,585		
Navigation Equipment									
3	Other Navigation Equipment	A	U	0	72,300	0	87,800		
Other Shipboard Equipment									
4	Sub Periscope, Imaging and Supt Equip Prog	A	U	0	209,792	0	261,011		
5	DDG Mod	A	U	0	535,667	0	744,341		
6	Firefighting Equipment	A	U	0	13,970	0	18,552		
7	Command and Control Switchboard	A	U	0	2,194	0	2,406		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 01: Ships support equipment							
Ship Propulsion Equipment							
1	Surface Power Equipment	A	U	0	46,478	0	14,003
Generators							
2	Surface Combatant HM&E	A	U	0	74,585	0	105,441
Navigation Equipment							
3	Other Navigation Equipment	A	U	0	87,800	0	110,286
Other Shipboard Equipment							
4	Sub Periscope, Imaging and Supt Equip Prog	A	U	0	261,011	0	262,951
5	DDG Mod	A	U	0	744,341	0	628,532
6	Firefighting Equipment	A	U	0	18,552	0	34,782
7	Command and Control Switchboard	A	U	0	2,406	0	2,458

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Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
8	LHA/LHD Midlife	A	U	0	119,428	0	38,200		
9	LCC 19/20 Extended Service Life Program	A	U	0	1,401	0	20,028		
10	Pollution Control Equipment	B	U	0	15,659	0	11,607		
11	Submarine Support Equipment	A	U	0	88,284	0	116,575		
12	Virginia Class Support Equipment	A	U	0	22,669	0	32,300		
13	LCS Class Support Equipment		U	0	9,640	0	22,238		
14	Submarine Batteries		U	0	21,834	0	24,137		
15	LPD Class Support Equipment		U	0	22,093	0	53,350		
16	DDG 1000 Class Support Equipment	A	U	0	71,561	0	314,333		
17	Strategic Platform Support Equip	A	U	0	12,256	0	13,504		
18	DSSP Equipment	A	U	0	3,282	0	3,660		
19	CG Modernization	A	U	0	138,926	0	59,054		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
8	LHA/LHD Midlife	A	U	0	38,200	0	104,369
9	LCC 19/20 Extended Service Life Program	A	U	0	20,028	0	10,529
10	Pollution Control Equipment	B	U	0	11,607	0	23,272
11	Submarine Support Equipment	A	U	0	116,575	0	112,526
12	Virginia Class Support Equipment	A	U	0	32,300	0	32,076
13	LCS Class Support Equipment		U	0	22,238	0	18,832
14	Submarine Batteries		U	0	24,137	0	28,221
15	LPD Class Support Equipment		U	0	53,350	0	91,890
16	DDG 1000 Class Support Equipment	A	U	0	314,333	0	232,124
17	Strategic Platform Support Equip	A	U	0	13,504	0	25,058
18	DSSP Equipment	A	U	0	3,660	0	4,623
19	CG Modernization	A	U	0	59,054		

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
20	LCAC	A	U	0	21,314	0	17,452		
21	Underwater EOD Equipment		U	0	24,146	0	35,417		
22	Items Less Than $5 Million	A	U	0	86,045	0	60,812		
23	Chemical Warfare Detectors	A	U	0	2,429	0	3,202		
Reactor Plant Equipment									
24	Ship Maintenance, Repair and Modernization	A	U	0	1,307,651	0	1,642,532		
25	Reactor Power Units	A	U	0	3,270	0	4,690		
26	Reactor Components	A	U	0	438,729	0	408,989		
Ocean Engineering									
27	Diving and Salvage Equipment	A	U	0	10,772	0	11,773		
Small Boats									
28	Standard Boats	A	U	0	135,226	0	88,562		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
20	LCAC	A	U	0	17,452	0	10,794
21	Underwater EOD Equipment		U	0	35,417	0	19,549
22	Items Less Than $5 Million	A	U	0	60,812	0	86,001
23	Chemical Warfare Detectors	A	U	0	3,202	0	3,288
Reactor Plant Equipment							
24	Ship Maintenance, Repair and Modernization	A	U	0	1,642,532	0	2,746,313
25	Reactor Power Units	A	U	0	4,690	0	2,016
26	Reactor Components	A	U	0	408,989	0	390,148
Ocean Engineering							
27	Diving and Salvage Equipment	A	U	0	11,773	0	18,086
Small Boats							
28	Standard Boats	A	U	0	88,562	0	74,963

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Production Facilities Equipment									
29	Operating Forces Ipe	A	U	0	460,822	0	174,743		
Other Ship Support									
30	LCS Common Mission Modules Equipment		U	0	63,501	0	54,883		
31	LCS MCM Mission Modules		U	0	30,119	0	92,495		
32	LCS ASW Mission Modules		U	0	1,565	0	3,594		
33	LCS SUW Mission Modules		U	0	3,395	0	5,100		
34	LCS In-Service Modernization	A	U	0	153,726	0	116,026		
35	Small & Medium UUV	A	U	0	44,534	0	49,763		
Logistic Support									
36	LSD Midlife & Modernization		U						
Total Ships support equipment					**4,267,668**		**4,714,192**		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Production Facilities Equipment							
29	Operating Forces Ipe	A	U	0	174,743	0	187,495
Other Ship Support							
30	LCS Common Mission Modules Equipment		U	0	54,883	0	49,060
31	LCS MCM Mission Modules		U	0	92,495	0	93,961
32	LCS ASW Mission Modules		U	0	3,594		
33	LCS SUW Mission Modules		U	0	5,100	0	12,102
34	LCS In-Service Modernization	A	U	0	116,026	0	171,704
35	Small & Medium UUV	A	U	0	49,763	0	61,951
Logistic Support							
36	LSD Midlife & Modernization		U			0	7,594
Total Ships support equipment					**4,714,192**		**5,776,998**

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 02: Communications and electronics equipment									
Ship Sonars									
37	SPQ-9B Radar	A	U	0	14,209	0	12,063		
38	AN/SQQ-89 Surf ASW Combat System	A	U	0	126,871	0	140,157		
39	SSN Acoustic Equipment	A	U	0	379,492	0	446,653		
40	Undersea Warfare Support Equipment	A	U	0	13,965	0	17,424		
ASW Electronic Equipment									
41	Submarine Acoustic Warfare System	A	U	0	24,578	0	31,708		
42	SSTD	A	U	0	11,010	0	14,325		
43	Fixed Surveillance System	A	U	0	363,651	0	266,228		
44	SURTASS	A	U	0	67,500	0	25,030		
Electronic Warfare Equipment									

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 02: Communications and electronics equipment							
Ship Sonars							
37	SPQ-9B Radar	A	U	0	12,063	0	7,267
38	AN/SQQ-89 Surf ASW Combat System	A	U	0	140,157	0	138,065
39	SSN Acoustic Equipment	A	U	0	446,653	0	463,577
40	Undersea Warfare Support Equipment	A	U	0	17,424	0	23,452
ASW Electronic Equipment							
41	Submarine Acoustic Warfare System	A	U	0	31,708	0	46,726
42	SSTD	A	U	0	14,325	0	14,560
43	Fixed Surveillance System	A	U	0	266,228	0	420,069
44	SURTASS	A	U	0	25,030	0	33,910
Electronic Warfare Equipment							

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
45	AN/SLQ-32	A	U	0	313,817	0	292,417		
Reconnaissance Equipment									
46	Shipboard IW Exploit	A	U	0	261,735	0	289,974		
47	Automated Identification System (AIS)		U	0	3,777	0	2,487		
Other Ship Electronic Equipment									
48	Cooperative Engagement Capability	B	U	0	24,641	0	33,200		
49	Naval Tactical Command Support System (NTCSS)	A	U	0	14,439	0	19,038		
50	ATDLS	A	U	0	100,888	0	73,675		
51	Navy Command and Control System (NCCS)		U	0	4,242	0	3,435		
52	Minesweeping System Replacement	A	U	0	15,640	0	16,336		
53	Shallow Water MCM	B	U	0	5,610				
54	Navstar GPS Receivers (SPACE)	A	U	0	33,097	0	30,439		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
45	AN/SLQ-32	A	U	0	292,417	0	329,513
Reconnaissance Equipment							
46	Shipboard IW Exploit	A	U	0	289,974	0	379,230
47	Automated Identification System (AIS)		U	0	2,487	0	4,082
Other Ship Electronic Equipment							
48	Cooperative Engagement Capability	B	U	0	33,200	0	37,677
49	Naval Tactical Command Support System (NTCSS)	A	U	0	19,038	0	15,374
50	ATDLS	A	U	0	73,675	0	50,148
51	Navy Command and Control System (NCCS)		U	0	3,435	0	3,918
52	Minesweeping System Replacement	A	U	0	16,336	0	16,814
53	Shallow Water MCM	B	U				
54	Navstar GPS Receivers (SPACE)	A	U	0	30,439	0	37,319

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
55	American Forces Radio and TV Service	A	U	0	2,513	0	2,724		
56	Strategic Platform Support Equip	A	U	0	4,823	0	6,266		
Aviation Electronic Equipment									
57	Ashore ATC Equipment	A	U	0	82,510	0	89,396		
58	Afloat ATC Equipment	A	U	0	61,502	0	79,591		
59	ID Systems	A	U	0	46,918	0	59,226		
60	Joint Precision Approach And Landing System (		U	0	35,386	0	8,186		
61	Naval Mission Planning Systems	A	U	0	16,777	0	25,092		
Other Shore Electronic Equipment									
62	Maritime Integrated Broadcast System		U	0	1,760	0	3,520		
63	Tactical/Mobile C4I Systems	A	U	0	18,790	0	27,434		
64	DCGS-N	A	U	0	16,691	0	15,606		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
55	American Forces Radio and TV Service	A	U	0	2,724	0	2,750
56	Strategic Platform Support Equip	A	U	0	6,266	0	6,437
	Aviation Electronic Equipment						
57	Ashore ATC Equipment	A	U	0	89,396	0	89,237
58	Afloat ATC Equipment	A	U	0	79,591	0	90,487
59	ID Systems	A	U	0	59,226	0	59,234
60	Joint Precision Approach And Landing System (		U	0	8,186	0	3,343
61	Naval Mission Planning Systems	A	U	0	25,092	0	39,180
	Other Shore Electronic Equipment						
62	Maritime Integrated Broadcast System		U	0	3,520	0	6,994
63	Tactical/Mobile C4I Systems	A	U	0	27,434	0	52,026
64	DCGS-N	A	U	0	15,606	0	16,579

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Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
65	CANES		U	0	412,002	0	402,550		
66	RADIAC	A	U	0	7,828	0	7,647		
67	CANES-Intell		U	0	51,593	0	48,665		
68	GPETE	A	U	0	23,930	0	23,479		
69	MASF		U	0	8,795	0	11,792		
70	Integ Combat System Test Facility	A	U	0	5,829	0	6,053		
71	EMI Control Instrumentation	A	U	0	3,925	0	4,219		
72	Items Less Than $5 Million	A	U	0	87,475	0	88,951		
73	In-Service Radars and Sensors	A	U						
Shipboard Communications									
74	Battle Force Tactical Network	A	U						
75	Shipboard Tactical Communications	A	U	0	43,212	0	36,941		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
65	CANES		U	0	402,550	0	467,587
66	RADIAC	A	U	0	7,647	0	16,475
67	CANES-Intell		U	0	48,665	0	48,207
68	GPETE	A	U	0	23,479	0	25,761
69	MASF		U	0	11,792	0	16,475
70	Integ Combat System Test Facility	A	U	0	6,053	0	6,345
71	EMI Control Instrumentation	A	U	0	4,219	0	4,282
72	Items Less Than $5 Million	A	U	0	88,951		
73	In-Service Radars and Sensors	A	U			0	255,256
Shipboard Communications							
74	Battle Force Tactical Network	A	U			0	74,180
75	Shipboard Tactical Communications	A	U	0	36,941	0	29,776

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Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
76	Ship Communications Automation	A	U	0	90,073	0	101,691		
77	Communications Items Under $5M	A	U	0	44,447	0	54,140		
Submarine Communications									
78	Submarine Broadcast Support	A	U	0	47,579	0	91,150		
79	Submarine Communication Equipment	A	U	0	64,642	0	74,569		
Satellite Communications									
80	Satellite Communications Systems	A	U	0	30,136	0	39,827		
81	Navy Multiband Terminal (NMT)		U	0	34,723	0	24,586		
Shore Communications									
82	Joint Communications Support Element (JCSE)	A	U	0	2,651	0	2,651		
Cryptographic Equipment									
83	Info Systems Security Program (ISSP)	A	U	0	145,311	0	156,034		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
76	Ship Communications Automation	A	U	0	101,691	0	96,916
77	Communications Items Under $5M	A	U	0	54,140	0	14,107
	Submarine Communications						
78	Submarine Broadcast Support	A	U	0	91,150	0	73,791
79	Submarine Communication Equipment	A	U	0	74,569	0	83,178
	Satellite Communications						
80	Satellite Communications Systems	A	U	0	39,827	0	72,871
81	Navy Multiband Terminal (NMT)		U	0	24,586	0	37,921
	Shore Communications						
82	Joint Communications Support Element (JCSE)	A	U	0	2,651	0	5,065
	Cryptographic Equipment						
83	Info Systems Security Program (ISSP)	A	U	0	156,034	0	154,890

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
84	MIO Intel Exploitation Team	A	U	0	977	0	1,055		
	Cryptologic Equipment								
85	Cryptologic Communications Equip	A	U	0	17,809	0	28,832		
	Other Electronic Support								
86	Coast Guard Equipment	A	U	0	81,464	0	63,347		
	Drug Interdiction Support								
87	Other Drug Interdiction Support	A	U	0	10,070				
	Total Communications and electronics equipment				**3,281,303**		**3,299,809**		
	Budget Activity 03: Aviation support equipment								
	Sonobuoys								
88	Sonobuoys - All Types	A	U	0	296,871	0	303,520		
	Aircraft Support Equipment								
89	Minotaur	A	U	0	4,963	0	5,247		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

Department of the Navy
FY 2024 President's Budget
Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
84	MIO Intel Exploitation Team	A	U	0	1,055	0	1,079
	Cryptologic Equipment						
85	Cryptologic Communications Equip	A	U	0	28,832	0	17,483
	Other Electronic Support						
86	Coast Guard Equipment	A	U	0	63,347	0	77,458
	Drug Interdiction Support						
87	Other Drug Interdiction Support	A	U				
	Total Communications and electronics equipment				**3,299,809**		**3,967,071**
	Budget Activity 03: Aviation support equipment						
	Sonobuoys						
88	Sonobuoys - All Types	A	U	0	303,520	0	311,177
	Aircraft Support Equipment						
89	Minotaur	A	U	0	5,247	0	5,396

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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
90	Weapons Range Support Equipment	A	U	0	87,748	0	106,209		
91	Aircraft Support Equipment	A	U	0	176,387	0	272,044		
92	Advanced Arresting Gear (AAG)	A	U	0	22,265	0	13,544		
93	Electromagnetic Aircraft Launch System (EMALS	A	U			0	18,594		
94	Meteorological Equipment	A	U	0	13,687	0	15,175		
95	Legacy Airborne MCM	A	U	0	4,443	0	4,689		
96	Lamps Equipment		U	0	1,470	0	1,610		
97	Aviation Support Equipment	A	U	0	62,496	0	82,118		
98	UMCS-Unman Carrier Aviation(UCA)Mission Cntrl	A	U	0	67,226	0	134,726		
99	Architect & Cap for Autonomy in Nav Enter (AR	A	U						
Total Aviation support equipment					**737,556**		**957,476**		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
90	Weapons Range Support Equipment	A	U	0	106,209	0	147,556
91	Aircraft Support Equipment	A	U	0	272,044	0	162,273
92	Advanced Arresting Gear (AAG)	A	U	0	13,544	0	11,930
93	Electromagnetic Aircraft Launch System (EMALS	A	U	0	18,594	0	17,836
94	Meteorological Equipment	A	U	0	15,175	0	19,703
95	Legacy Airborne MCM	A	U	0	4,689	0	12,202
96	Lamps Equipment		U	0	1,610		
97	Aviation Support Equipment	A	U	0	82,118	0	82,115
98	UMCS-Unman Carrier Aviation(UCA)Mission Cntrl	A	U	0	134,726	0	152,687
99	Architect & Cap for Autonomy in Nav Enter (AR	A	U			0	1,612
Total Aviation support equipment					**957,476**		**924,487**

Department of the Navy
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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 04: Ordnance support equipment									
Ship Gun System Equipment									
100	Ship Gun Systems Equipment	A	U	0	5,536	0	5,902		
Ship Missile Systems Equipment									
101	Harpoon Support Equipment	A	U	0	204	0	217		
102	Ship Missile Support Equipment	A	U	0	221,463	0	276,632		
103	Tomahawk Support Equipment	A	U	0	87,147	0	92,270		
FBM Support Equipment									
104	Strategic Missile Systems Equip	A	U	0	276,430	0	279,430		
ASW Support Equipment									
105	SSN Combat Control Systems	A	U	0	128,117	0	128,874		
106	ASW Support Equipment	A	U	0	26,852	0	35,720		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

Department of the Navy
FY 2024 President's Budget
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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 04: Ordnance support equipment							
Ship Gun System Equipment							
100	Ship Gun Systems Equipment	A	U	0	5,902	0	6,404
Ship Missile Systems Equipment							
101	Harpoon Support Equipment	A	U	0	217	0	227
102	Ship Missile Support Equipment	A	U	0	276,632	0	294,511
103	Tomahawk Support Equipment	A	U	0	92,270	0	92,432
FBM Support Equipment							
104	Strategic Missile Systems Equip	A	U	0	279,430	0	325,318
ASW Support Equipment							
105	SSN Combat Control Systems	A	U	0	128,874	0	133,063
106	ASW Support Equipment	A	U	0	35,720	0	27,469

Department of the Navy
FY 2024 President's Budget
Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Other Ordnance Support Equipment									
107	Explosive Ordnance Disposal Equip	B	U	0	1,721	0	14,336		
108	Items Less Than $5 Million	A	U	0	6,997	0	5,938		
Other Expendable Ordnance									
109	Anti-Ship Missile Decoy System	A	U	0	76,994	0	86,264		
110	Submarine Training Device Mods	A	U	0	75,813	0	80,591		
111	Surface Training Equipment	A	U	0	135,814	0	203,695		
Total Ordnance support equipment					**1,043,088**		**1,209,869**		
Budget Activity 05: Civil engineering support equipment									
Civil Engineering Support Equipment									
112	Passenger Carrying Vehicles	A	U	0	4,290	0	4,799		
113	General Purpose Trucks	A	U	0	2,805	0	2,542		
114	Construction & Maintenance Equip	A	U	0	51,477	0	50,001		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

Department of the Navy
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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Other Ordnance Support Equipment							
107	Explosive Ordnance Disposal Equip	B	U	0	14,336	0	27,864
108	Items Less Than $5 Million	A	U	0	5,938	0	6,171
Other Expendable Ordnance							
109	Anti-Ship Missile Decoy System	A	U	0	86,264	0	56,630
110	Submarine Training Device Mods	A	U	0	80,591	0	76,954
111	Surface Training Equipment	A	U	0	203,695	0	209,487
Total Ordnance support equipment					**1,209,869**		**1,256,530**
Budget Activity 05: Civil engineering support equipment							
Civil Engineering Support Equipment							
112	Passenger Carrying Vehicles	A	U	0	4,799	0	3,827
113	General Purpose Trucks	A	U	0	2,542	0	4,570
114	Construction & Maintenance Equip	A	U	0	50,001	0	56,829

Department of the Navy
FY 2024 President's Budget
Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
115	Fire Fighting Equipment	A	U	0	15,084	0	16,305		
116	Tactical Vehicles	B	U	0	24,900	0	26,276		
117	Amphibious Equipment	A	U						
118	Pollution Control Equipment	A	U	0	5,369	0	2,840		
119	Items less than $5 Million	A	U	0	51,420	0	55,200		
120	Physical Security Vehicles	A	U	0	1,165	0	1,263		
Total Civil engineering support equipment					**156,510**		**159,226**		
Budget Activity 06: Supply support equipment									
Supply Support Equipment									
121	Supply Equipment	A	U	0	24,697	0	32,338		
122	First Destination Transportation	A	U	0	5,385	0	6,255		
123	Special Purpose Supply Systems	A	U	0	660,750	0	613,039		
Total Supply support equipment					**690,832**		**651,632**		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

Department of the Navy
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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
115	Fire Fighting Equipment	A	U	0	16,305	0	16,583
116	Tactical Vehicles	B	U	0	26,276	0	24,236
117	Amphibious Equipment	A	U			0	4,504
118	Pollution Control Equipment	A	U	0	2,840	0	3,898
119	Items less than $5 Million	A	U	0	55,200	0	67,286
120	Physical Security Vehicles	A	U	0	1,263	0	1,286
Total Civil engineering support equipment					**159,226**		**183,019**
Budget Activity 06: Supply support equipment							
Supply Support Equipment							
121	Supply Equipment	A	U	0	32,338	0	33,258
122	First Destination Transportation	A	U	0	6,255	0	6,977
123	Special Purpose Supply Systems	A	U	0	613,039	0	659,529
Total Supply support equipment					**651,632**		**699,764**

Department of the Navy
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1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 07: Personnel and command support equipment									
Training Devices									
124	Training Support Equipment	A	U	0	3,202	0	1,285		
125	Training and Education Equipment	A	U	0	58,823	0	44,618		
Command Support Equipment									
126	Command Support Equipment	A	U	0	30,387	0	38,774		
127	Medical Support Equipment	A	U	0	14,346	0	25,325		
129	Naval MIP Support Equipment	A	U	0	2,887	0	6,077		
130	Operating Forces Support Equipment	A	U	0	12,815	0	13,784		
131	C4ISR Equipment	A	U	0	6,324	0	6,497		
132	Environmental Support Equipment	A	U	0	25,098	0	36,592		
133	Physical Security Equipment	A	U	0	107,448	0	107,372		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 07: Personnel and command support equipment							
Training Devices							
124	Training Support Equipment	A	U	0	1,285	0	2,083
125	Training and Education Equipment	A	U	0	44,618	0	106,542
Command Support Equipment							
126	Command Support Equipment	A	U	0	38,774	0	44,448
127	Medical Support Equipment	A	U	0	25,325	0	12,529
129	Naval MIP Support Equipment	A	U	0	6,077	0	5,408
130	Operating Forces Support Equipment	A	U	0	13,784	0	12,105
131	C4ISR Equipment	A	U	0	6,497	0	7,670
132	Environmental Support Equipment	A	U	0	36,592	0	52,597
133	Physical Security Equipment	A	U	0	107,372	0	108,901

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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
134	Enterprise Information Technology	A	U	0	31,709	0	29,407		
Productivity Programs									
137	Judgment Fund Reimbursement	A	U	0	3				
Other									
138	Cancelled Account Adjustments	A	U	0	251				
139	Next Generation Enterprise Service	A	U	0	175,041	0	201,314		
140	Cyberspace Activities	A	U	0	12,859	0	5,018		
141	Cyber Mission Forces	A	U			0	17,115		
Classified Programs									
999	Classified Programs		U		21,058		30,895		2,170
Total Personnel and command support equipment					**502,251**		**564,073**		**2,170**

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
134	Enterprise Information Technology	A	U	0	29,407	0	42,154
Productivity Programs							
137	Judgment Fund Reimbursement	A	U				
Other							
138	Cancelled Account Adjustments	A	U				
139	Next Generation Enterprise Service	A	U	0	201,314	0	177,585
140	Cyberspace Activities	A	U	0	5,018	0	23,176
141	Cyber Mission Forces	A	U	0	17,115		
Classified Programs							
999	Classified Programs		U		33,065		16,290
Total Personnel and command support equipment					**566,243**		**611,488**

Department of the Navy
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1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 08: Spares and repair parts									
Spares and Repair Parts									
142	Spares and Repair Parts	A	U	0	445,621	0	582,313		
143	VIRGINIA Class (VACL) Spares and Repair parts	A	U						
Total Spares and repair parts					**445,621**		**582,313**		
Total Other Procurement, Navy					**11,124,829**		**12,138,590**		**2,170**

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 08: Spares and repair parts							
Spares and Repair Parts							
142	Spares and Repair Parts	A	U	0	582,313	0	645,900
143	VIRGINIA Class (VACL) Spares and Repair parts	A	U			0	470,000
Total Spares and repair parts					**582,313**		**1,115,900**
Total Other Procurement, Navy					**12,140,760**		**14,535,257**

Department of Defense
FY 2024 President's Budget
Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
DoD Component Summary
(Dollars in Thousands)

Appropriation Summary	FY 2023 Overseas Operations Costs (OOC)*	FY 2024 Overseas Operations Costs (OOC)*
Other Procurement, Navy	69,277	46,435
Total Department of the Navy	**69,277**	**46,435**
Grand Total Department of Defense	**69,277**	**46,435**

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

Department of the Navy
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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
Navy Summary
(Dollars in Thousands)

Appropriation Summary	FY 2023 Overseas Operations Costs (OOC)*	FY 2024 Overseas Operations Costs (OOC)*
Other Procurement, Navy	69,277	46,435
Total Department of the Navy	**69,277**	**46,435**

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

Department of the Navy
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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N BA Summary
(Dollars in Thousands)

Appropriation: **Other Procurement, Navy**	FY 2023 Overseas Operations Costs (OOC)*	FY 2024 Overseas Operations Costs (OOC)*
Budget Activity		
02. Communications and electronics equipment	54,995	
03. Aviation support equipment	11,052	46,435
07. Personnel and command support equipment	3,230	
Total Other Procurement, Navy	**69,277**	**46,435**

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

Department of the Navy
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Total Obligational Authority
1810N Detail
(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Overseas Operations Costs (OOC)		FY 2024 Overseas Operations Costs (OOC)	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost*	Quantity	Cost*
Budget Activity 02: Communications and electronics equipment							
ASW Electronic Equipment							
43	Fixed Surveillance System	A	U	0	54,995		
Total Communications and electronics equipment				**0**	**54,995**		
Budget Activity 03: Aviation support equipment							
Sonobuoys							
88	Sonobuoys - All Types	A	U	0	11,052	0	10,206
Aircraft Support Equipment							
91	Aircraft Support Equipment	A	U			0	36,229
Total Aviation support equipment				**0**	**11,052**	**0**	**46,435**
Budget Activity 07: Personnel and command support equipment							
Command Support Equipment							
126	Command Support Equipment	A	U	0	3,230		
Total Personnel and command support equipment				**0**	**3,230**		

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

Department of the Navy
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Total Obligational Authority
1810N Detail
(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Overseas Operations Costs (OOC)		FY 2024 Overseas Operations Costs (OOC)	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost*	Quantity	Cost*
Total Other Procurement, Navy				0	69,277	0	46,435

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

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Appropriation 1810N: Other Procurement, Navy

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	100.221	41.414	46.478	14.003	0.000	14.003	17.375	17.662	19.810	16.716	14.045	287.724
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	100.221	41.414	46.478	14.003	0.000	14.003	17.375	17.662	19.810	16.716	14.045	287.724
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**100.221**	**41.414**	**46.478**	**14.003**	**0.000**	**14.003**	**17.375**	**17.662**	**19.810**	**16.716**	**14.045**	**287.724**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY2024 budget decreased due to the procurement schedule. The MT30, K34 and MT5S will not be procured in FY24.

Surface Power Equipment budget line provides life-cycle support for the following Marine Gas Turbine systems:

The General Electric LM2500 Marine Gas Turbine provides main propulsion for the Navy's surface combatants including the CG 47 TICONDEROGA Class, DDG 51 ARLEIGH BURKE Class, and LCS-2 (Austal) Class. The LM2500 is composed of two major sub-assemblies: the gas generator and power turbine sections. It is coupled to the ship drive-train by a high speed coupling shaft. The LM2500+ Marine Gas Turbine and its associated Engineering Control Systems provide main propulsion power for the Navy's amphibious assault ships including the LHD-8 USS MAKIN ISLAND, LHA-6 USS AMERICA and LHA-7 USS TRIPOLI. The LM2500+ is composed of two major sub-assemblies: the gas generator and power turbine sections. It is coupled to the ship drive-train by a high speed coupling shaft. The control system for both engines provides for both local and remote engine operations.

The Rolls Royce (Allison) 501-K Series Gas Turbines are used to drive electrical generators in Ship Service Gas Turbine Generators (SSGTG). The 501-K17 is used on the CG-47 Class ships. The 501-K34 is an upgraded version used on the DDG-51 Class ships and is not interchangeable with the 501-K17. The MT5S is a higher-power derivative of the 501-K engine family (utilizing Rolls Royce's new "Marine Trent" or "MT" naming convention vice the older "501-K" naming convention) used for auxiliary electrical generation on DDG-1000 class ships; the MT5S is not interchangeable with the 501-K17 or 501-K34. The MT5S is used within the RR4500 auxiliary turbine generator (ATG) aboard DDG-1000 Class ships. The MT5S-HE+ is used within the AG9160RF SSGTG aboard DDG-51 Flight III ships. Based on the MT5S design, the MT5S-HE+ includes several material changes designed to improve fuel efficiency and increase AG9160RF electrical power output when compared to the RR4500. The Rolls Royce MT-30 is used on LCS-1 (Lockheed) Class for main propulsion and DDG 1000 for electrical generation. Rolls Royce 250-KS4 is used as a starter gas turbine for the 501-K34 on DDG 79 and follow. The Rolls Royce MT7 gas turbine is used for both lift and propulsion fan power on the next generation of LCAC landing craft.

Digital Fuel Control (DFC) procurement quantities are based upon the DDG modernization schedule and quantities are procured one year in advance of the scheduled availabilities due to long material lead times.

The Surface Power Equipment budget line may also be used to procure spare waterborne shafting (propeller shafts and stern tube shafts) and controllable pitch propeller (CPP) system end items such as propeller blades, hubs and oil distribution (OD) boxes used on DDG 51 class ships.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

The budget funds the following:

[P40A / PE009 GE Readiness Improvement Upgrade Kits]: PE009 - MODIFICATION KIT PROGRAM: This cost element procures modification kits listed below for the GE Gas Turbine Engine. These modifications increase reliability and fleet readiness through component upgrades which improves the Mean Time Between Failure (MTBF). The modification kits are procured based on historical usage rates, re-packaged into individual kits, and sent to either a depot to be installed during engine overhauls or to Regional Maintenance Centers for installation. Procurement quantities are not shown because these funds are used to procure a variety of modification kits, with specific kit quantities and prices varying from one year to the next. The kits included in the cost code are as follows:
--Accelerometers (Vibration Monitor)
-- Compressor Rear Frame Mid-flange Fastener installation
-- C-Sump Lubrication Supply Line
-- Power Turbine Upgraded Speed Sensor
-- Improved Drain Shutoff Valve
-- Turbine Mid-Frame Modification
-- 7B Piping Modification
-- 5-Element to 6-Element Pump Conversion
-- T5.4 Flexible Thermo Harness
-- Mid Flange Fastener

[P40A / PE010 Stock Rotating Spares]: PE010 - GAS GENERATOR: This cost element procures the LM2500 and LM2500+ single shank propulsion gas turbines to support surface combatant and amphibious assault class surface ships. The programs projected in-service population of single shank propulsion gas turbine engines is estimated to be 382 due to new construction. Breakdown of ship class spare procurement is listed below. The procurement of these engines includes all required shipping/storage containers.

DDG LM2500 Single Shank
Based on experience with 35 years of usage demand data on the LM2500 Engine and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 36 spares are required to support the fleet requirements.

LCS 2 LM2500 Single Shank.
Based on experience with 35 years of usage demand data on the LM2500 Engine and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 3 spares are required to support the fleet requirements. As of FY21 no requirement to procure LM2500 Single Shanks.

LHD8/LHA6/LHA7 LM2500+ Single Shank Gas Generator Assembly (SST GGA) and Power Turbine Assembly (PTA)
Based on experience with 35 years of usage demand data on the LM2500 Engine and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 2 spares are required to support the fleet requirements. Based on sparing requirement procurement of 2 additional LM2500+ engines are required. Total of 4 engines are required.

LM2500 Hot Section Kits
Are procured as required from the below list per quarterly failure analysis and maintained to replace High Pressure Turbine (HPT) components beyond repairable limits. Shortages of replacement blades increase engine repair turn-around time (RTAT) during engine refurbishment/repair as a result of material shortages.

Procurement quantities are a result of procuring various kits of various costs. The kits included in the cost code are as follows:
--HPT Shrouds
--HPT Seal Assembly

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment	P-1 Line Item Number / Title: 0131 / Surface Power Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

--HPT Blades
--HPT Nozzles
--Compressor Blades

[P40A / PE014 Special Support Equipage]: PE014 Special Support Equipage - This cost element procures Special Support Equipment for all marine gas turbines to support gas turbine changeouts and to allow for increased I-level (intermediate level) repair capability, thereby reducing the number of engine change outs required and stabilizing or reducing the cost to overhaul engines at the depot. No installation cost is associated with this cost element.

[P40A / PE015 LM2500 DIGITAL FUEL CONTROL]: PE015 - LM2500 DIGITAL FUEL CONTROL (DFC)- This cost element procures the Digital Fuel Control (DFC) shipsets, ancillary equipment and install material to support the CG/DDG modernization schedules. Procurement and installations are budgeted to correspond with CNO ship availabilities. One DFC kit is required to update each of the four LM2500 engines, which makes one DFC shipset. The DFC upgrade is a mandatory portion of DDG-51 modernizations; the modernized machinery control system (MCS)is incapable of interfacing with LM2500 engines not equipped with DFC. The DFC is the most significant change to the LM2500 engine since its inception into the USN that addresses obsolete components which accounted for approximately 40% of all engine failures. In summary, this modification is estimated to be 75% more reliable than the old system. This upgrade also replaces the Hydro-mechanical main fuel control (MFC) system, which was designed for aircraft, with a DFC system designed for a military marine environment. This modification increases engine reliability, decreases periodic maintenance, enhances operational functions, and provides an automatic stall detection and shutdown capability.

PE6IN - INSTALLATION FOR DIGITAL FUEL CONTROL (DFC)- This cost element funds the installation of Cost element PE015, LM2500 Digital Fuel Control (DFC) shipsets, as part of the CG/DDG HM&E modernization program. This includes pre-assembly at NSWCPD (Philadelphia), shipping to installation location, shipboard installation, training, post installation operational testing and associated travel cost.

[P40A - 2 / PE001 STOCK ROTATING SPARES]: PE001 - STOCK ROTATING SPARES
This cost element procures the MT-30 for DDG1000 Zumwalt Class and Littoral Combat Ship (LCS) Independence Variant, MT-5 series gas turbines for the DDG 1000 Zumwalt Class and DDG-51 Flight III program, the 250-KS4 SSGTG starter engines for the DDG 79 and follow, and the 501-K34 gas turbines DDG 51 class ships. The procurement of these engines includes all required shipping/storage containers and necessary hardware to allow for installation of the MT30 gas turbine into DDG1000 or LCS5AF hull types.

MT-30 Gas Turbines
Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 6 spares are required to support the fleet.

MT-5 Gas Turbines
Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 4 MT-5 spares are required to support the fleet. The in-service population of MT-5S gas turbine engines is six (6) due to new construction of DDG1000 and thirty (30) of the higher efficiency MT5S-HE+ units for DDG-51 Flight III.

250-KS4 SSGTG Starter Engines
Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 12 spares are required to support the fleet requirements. Current spares on-hand is twelve (12) which achieves the baseline sparing requirement. The projected FY-19 in-service population of starter engines is 103 due to new construction, but would be 169 if Flight IIA and Flight III were included. Operation Tomodachi has resulted in the radiological contamination of twelve (12) 250-KS4 Marine Gas Turbines, which created an unplanned requirement to replace the twelve (12) affected engines beginning in FY13. Completion of procurement of 12 replacement engines in FY23.

501-K34 Gas Turbines
Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 26 spares are required to support the fleet requirements.

[P40A - 2 / PE007 MODIFICATION PROGRAM]: PE007 - MODIFICATION PROGRAM

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

This cost element procures modification kits listed below for the Rolls Royce Marine Gas Turbines (MGT). Analysis of Rolls Royce MGT engineering performance data, metrics, the SEA 21 Top Tech Issues and the component improvement program has identified necessary improvements to correct Rolls Royce MGT deficiencies. The modifications addresses the Fleet's top maintenance and reliability issues by reducing failure rates of system components, and improve Rolls Royce MGT readiness.
The modification kits are packaged and shipped to the ship for installation during schedule CNO availability by a team of NSWCPD (Philadelphia) and Alteration Installation Team (AIT) personnel. Procurement quantities are not shown because these funds are used to procure a variety of modification kits, with specific kit quantities and prices varying from one year to the next. The kits included in the cost code are as follows:

--FADC upgrade conversion
--MT30 variant conversion kits

[P40A - 3 / PE830 PRODUCTION ENGINEERING]: PE830 PRODUCTION ENGINEERING The review and approval of any production contract technical documentation, or the separate development of this documentation to include:
- Technical Manuals
- Signal Flow Diagrams
- PMS
- Level III Production Drawings
- Provisioning Technical Documentation (PTD)
- Program Support Data
- Allowance Parts Lists (APL's)
- Engineering in support of final design reviews.

This includes efforts associated with tracking and updating Navy Data Environment (NDE), Marine Gas Turbine Information System (MGTIS) and Weblog to reflect completed installations and ensure consistent documentation for engine configuration management.

[P40A - 4 / PE110 Propellers and Shafts]: PE110- VARIOUS PROPELLERS AND SHAFTS - This funding procures controllable pitch propeller (CPP) system end items such as propeller blades, hubs and oil distribution (OD) boxes used on DDG 51, LHD 8 and following (AF), LPD, LHA 6 AF, LSD 41, and DDG1000 class ships. These spares are required to DDG 51, LHD 8 and following (AF), LPD, LHA 6 AF, LSD 41, and DDG1000 Fleet demand due to scheduled replacement caused by lifecycle wear and unscheduled replacements caused by Casualty Reports (CASREPs). The component has long repair turn-around times (1-2 years) and thus cannot be repaired and reused during the same availability. The technical requirements and drydocking constraints drives the program to establish a rotatable pool to support replacements. The growing size of the fleet and insufficiency of the current number of DDG 51, LHD 8 and following (AF), LPD, LHA 6 AF, LSD 41, and DDG1000 spares to meet upcoming change-out demand per CNO availability schedules is driving the requirement to increase the number of spares to support a rotatable pool and ensure readiness. A malfunctioning propeller or shaft may result in excessive vibration, which could lead to damage of ship structures and equipment (bearings, main reduction gears, and bulkhead seal), increase of ship cavitation/noise, loss of speed or loss of motion.

[P40A - 5 / PE130 - Steam Propulsion Items]: PE130 - STEAM PROPULSION ITEMS - This provides for several initiatives oriented to upgrading boiler efficiency and safety with downstream maintenance effectiveness. In particular, the items procured include: Upgraded Stack Gas Analyzer (SGA) , Optimization Trim Loop Material including fuel oil meters, stack gas temperature sensors, electronic automatic boiler controls interface software/schema to improve steam plant efficiency, Upgraded electronic automatic boiler control (E-ABC) system process controllers/smart transmitters, Upgraded Boiler Water/Feedwater (BW/FW) Chemistry Analysis/Carbohydrazide Implementation Equipment., Upgraded SSTG Protective Devices (Overspeed Trips), and Upgrades to Boiler Igniter System (BIS) (Fuel Valve and Insert/Retract Air Actuators). The Steam Propulsion Improvement Program provides safe and reliable power for ship movement through the water, and, in addition, provides power to ships combat and habitability systems, whether electrical or steam dependent. At any given time, due to propulsion plant casualties, ship propulsion systems may be operating at reduced capability, adversely affecting the ship's mission(s). The Steam Propulsion improvement program encompasses steam and diesel propulsion surface ships in the Fleet, and provides for material upgrades to propulsion systems resulting in increased readiness, safety and reliability. Items can be installed during a scheduled or unscheduled availability by a shipyard, tender/Intermediate Maintenance Activity or Alteration Installation Team (AIT).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	**Title***	**Subexhibits**	**ID CD**	**MDAP/ MAIS Code**	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-40a	General Electric Gas Turbine				- / 9.539	- / 0.714	- / 1.027	- / 7.589	- / -	- / 7.589
P-40a	Rolls Royce Gas Turbine	P-5a			- / 44.541	- / 25.290	- / 27.867	- / 2.970	- / -	- / 2.970
P-40a	PE830 PRODUCTION ENGINEERING				- / 1.744	- / 0.350	- / 0.350	- / 0.360	- / -	- / 0.360
P-40a	PE110 Propellers and Shafts				- / 0.000	- / 10.139	- / 11.841	- / 2.228	- / -	- / 2.228
P-40a	PE130 - Steam Propulsion Items				- / 0.000	- / 2.102	- / 0.242	- / 0.247	- / -	- / 0.247
P-3a	1 / PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL (TBD)				- / 44.397	- / 2.819	- / 5.151	- / 0.609	- / 0.000	- / 0.609
P-40	**Total Gross/Weapon System Cost**				**- / 100.221**	**- / 41.414**	**- / 46.478**	**- / 14.003**	**- / 0.000**	**- / 14.003**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	**Title***	**Subexhibits**	**ID CD**	**MDAP/ MAIS Code**	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-40a	General Electric Gas Turbine				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	Rolls Royce Gas Turbine	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-40a	PE830 PRODUCTION ENGINEERING				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	PE110 Propellers and Shafts				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	PE130 - Steam Propulsion Items				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.195	- / 53.171
P-40	**Total Gross/Weapon System Cost**				**- / 17.375**	**- / 17.662**	**- / 19.810**	**- / 16.716**	**- / 14.045**	**- / 287.724**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	**Aggregated Items Title:** General Electric Gas Turbine

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) PE009 GE Readiness Improvement Upgrade Kits																				
1.1) MODIFICATION KIT PROGRAM (1)	A		-	-	1.456	-	-	0.526	-	-	0.844	-	-	0.200	-	-	-	-	-	0.200
Subtotal: 1) PE009 GE Readiness Improvement Upgrade Kits			**-**	**-**	***1.456***	**-**	**-**	***0.526***	**-**	**-**	***0.844***	**-**	**-**	***0.200***	**-**	**-**	**-**	**-**	**-**	***0.200***
2) PE010 Stock Rotating Spares																				
2.1) LHD/LHA6 LM2500+ (2)	A		5,329K	1	5.329	-	-	-	-	-	-	7,194K	1	7.194	-	-	-	7,194K	1	7.194
Subtotal: 2) PE010 Stock Rotating Spares			**-**	**-**	***5.329***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***7.194***	**-**	**-**	**-**	**-**	**-**	***7.194***
3) PE014 Special Support Equipage																				
3.1) Special Support Equipage	A		-	-	2.189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) PE014 Special Support Equipage			**-**	**-**	***2.189***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) PE015 LM2500 DIGITAL FUEL CONTROL																				
4.1) ANCILLARY EQUIPMENT/ INSTALLATION MATERIALS (3)	A		-	-	0.565	-	-	0.188	-	-	0.183	-	-	0.195	-	-	-	-	-	0.195
Subtotal: 4) PE015 LM2500 DIGITAL FUEL CONTROL			**-**	**-**	***0.565***	**-**	**-**	***0.188***	**-**	**-**	***0.183***	**-**	**-**	***0.195***	**-**	**-**	**-**	**-**	**-**	***0.195***
Total			**-**	**-**	**9.539**	**-**	**-**	**0.714**	**-**	**-**	**1.027**	**-**	**-**	**7.589**	**-**	**-**	**-**	**-**	**-**	**7.589**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) PE009- procures multiple different upgrade modification kits to be installed during overhaul for LM2500s. This can vary from year to year and funds requirement is based on kit needs and overhaul inductions.

(2) Marine gas turbine procurements are to support rotable pools. These spare procurement needs can fluctuate based on failure rates seen in the fleet, repair turn around time, and available budget therefore the procurements are not steady state year to year. Unit Cost of LM2500+ increase due to updated ROM from vendor based on current market.

(3) Cost increased based on ancillary equipment cost trend from vendor and Navy supply.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0131 / Surface Power Equipment	Aggregated Items Title: Rolls Royce Gas Turbine

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) PE001 STOCK ROTATING SPARES																				
1.1) 501-K34 (4)(†)	A		2,819K	3	8.457	2,452K	1	2.452	-	-	-	-	-	-	-	-	-	-	-	-
1.2) 250-KS4 (5)(†)	A		526,200.00	5	2.631	590,000.00	1	0.590	650,000.00	1	0.650	696,000.00	1	0.696	-	-	-	696,000.00	1	0.696
1.3) MT-30 (6)(†)	A		19,001K	1	19.001	20,800K	1	20.800	20,900K	1	20.900	-	-	-	-	-	-	-	-	-
1.4) MT-5S (7)(†)	A		4,231K	2	8.462	-	-	-	4,308K	1	4.308	-	-	-	-	-	-	-	-	-
Subtotal: 1) PE001 STOCK ROTATING SPARES			**-**	**-**	***38.551***	**-**	**-**	***23.842***	**-**	**-**	***25.858***	**-**	**-**	***0.696***	**-**	**-**	**-**	**-**	**-**	***0.696***
2) PE007 MODIFICATION PROGRAM																				
2.1) PROCURE MODIFICATION KITS (8)	A		-	-	4.445	-	-	0.875	-	-	1.509	-	-	1.632	-	-	-	-	-	1.632
2.2) INSTALLATION FOR MODIFICATION KITS (9)	A		-	-	1.545	-	-	0.573	-	-	0.500	-	-	0.642	-	-	-	-	-	0.642
Subtotal: 2) PE007 MODIFICATION PROGRAM			**-**	**-**	***5.990***	**-**	**-**	***1.448***	**-**	**-**	***2.009***	**-**	**-**	***2.274***	**-**	**-**	**-**	**-**	**-**	***2.274***
Total			**-**	**-**	**44.541**	**-**	**-**	**25.290**	**-**	**-**	**27.867**	**-**	**-**	**2.970**	**-**	**-**	**-**	**-**	**-**	**2.970**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(4) PE001 STOCK ROTATING SPARES K34- Sparing requirement fulfilled

(5) Inflation above 2% based on recent procurements and vendor ROM for future years.

(6) PE001, MT-30 - procurement required FY22 and FY23 to match assessed spare requirement based on LCS-1/DDG-1000 ship inventory. Price increase in FY23 due to inflation. Completion of procurement of 12 replacement engines in FY23. Final MT30 procurement per NAVSEA INST 4442.1C sparing requirements in FY24.

(7) PE001 STOCK ROTATING SPARES MT5S- Marine gas turbine procurements are to support rotable pools. These spare procurement needs can fluctuate based on fleet size, operation and available budget therefore the procurements are not steady state year to year.

(8) PE007 MODIFICATION PROGRAM: The modification program is designed to procure and install hardware to affect improvements in reliability and maintainability aboard CG-47 and DDG-51 class Ship Service Gas Turbine Generator (SSGTG) units. Each hull has a total of three (3) SSGTG units installed. Each SSGTG is controlled by a Full Authority Digital Control (FADC). CG-47 class uses the 501-K17 and DDG-51 class uses the 501-K34. There are currently three variants of the 501-K34 SSGTG: AG9130, AG9140HF and AG9140RF. The AG9140RF also includes the Remote Independent Mechanical Starting System (RIMSS) consisting of the 250-KS4 engine. The quantity of modification kits procured corresponds to the number of SSGTG units to be upgraded. The type and scope of each modification required will vary from one ship to the next. The number and type of kits installed in any given Fiscal Year (FY) varies depending upon ship availability schedules during that FY. Inflation above 2% based on recent procurements and vendor ROM for future years.

(9) Inflation above 2% based on recent procurements and vendor ROM for future years.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0131 / Surface Power Equipment	Aggregated Items: Rolls Royce Gas Turbine

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) PE001 STOCK ROTATING SPARES												
1.1) 501-K34 (4)		2020	ROLLS ROYCE / WALEPOLE, MA	SS / FFP	NAVSEA, Washington DC	Sep 2020	Aug 2022	1	3,075K	Y		Dec 2018
1.1) 501-K34 (4)		2022	ROLLS ROYCE / WALEPOLE, MA	SS / FFP	NSWCPD	Mar 2022	Sep 2023	1	2,452K	Y		Dec 2021
1.2) 250-KS4 (5)		2021	ROLLS ROYCE / WALEPOLE, MA	SS / FFP	NSWCPD	Mar 2021	Sep 2022	1	582,000.00	Y		Dec 2020
1.2) 250-KS4 (5)		2022	ROLLS ROYCE / WALEPOLE, MA	SS / FFP	NSWCPD	Mar 2022	Aug 2023	1	590,000.00	Y		Dec 2021
1.2) 250-KS4 (5)		2023	ROLLS ROYCE / WALEPOLE, MA	SS / FFP	NSWCPD	Oct 2022	Oct 2022	1	650,000.00	Y		
1.3) MT-30 (6)		2022	ROLLS ROYCE / WALEPOLE, MA	SS / FFP	NSWCPD	May 2022	Nov 2023	1	20,800K	Y		
1.3) MT-30 (6)		2023	ROLLS ROYCE / WALEPOLE, MA	C / TBD	NSWCPD	Oct 2022	Apr 2024	1	20,900K	N		
1.4) MT-5S (7)		2023	ROLLS ROYCE / WALEPOLE, MA	C / TBD	NSWCPD	Oct 2022	Apr 2024	1	4,308K	N		

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	**Aggregated Items Title:** PE830 PRODUCTION ENGINEERING (10)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) Production Engineering																				
1.1) Production Engineering	A		-	-	1.744	-	-	0.350	-	-	0.350	-	-	0.360	-	-	-	-	-	0.360
Subtotal: 1) Production Engineering			**-**	**-**	***1.744***	**-**	**-**	***0.350***	**-**	**-**	***0.350***	**-**	**-**	***0.360***	**-**	**-**	**-**	**-**	**-**	***0.360***
Total			**-**	**-**	**1.744**	**-**	**-**	**0.350**	**-**	**-**	**0.350**	**-**	**-**	**0.360**	**-**	**-**	**-**	**-**	**-**	**0.360**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(10) PE830 PRODUCTION ENGINEERING- The review and approval of any production contract technical documentation, or the separate development of this documentation to include: - Technical Manuals - Signal Flow Diagrams - PMS - Level III Production Drawings - Provisioning Technical Documentation (PTD) - Program Support Data - Allowance Parts Lists (APL's) - Engineering in support of final design reviews. This includes efforts associated with tracking and updating Navy Data Environment (NDE), Marine Gas Turbine Information System (MGTIS) and Weblog to reflect completed installations and ensure consistent documentation for engine configuration management.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	**Aggregated Items Title:** PE110 Propellers and Shafts (11)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) PE110 - Propellers and Shafts -DDG 51 (12)																				
1.1) PE110 - Propellers and Shafts - DDG 51 Blade Set (13)	A		-	-	-	1,238K	5	6.188	1,497K	3	4.490	-	-	-	-	-	-	-	-	-
Subtotal: 1) PE110 - Propellers and Shafts -DDG 51			**-**	**-**	***0.000***	**-**	**-**	***6.188***	**-**	**-**	***4.490***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) PE110 - Propellers and Shafts - LHA6/LHD8																				
2.2) PE110 - Propellers and Shafts - LHA6/LHD8 Hub (14)	A		-	-	-	-	-	-	1,355K	1	1.355	-	-	-	-	-	-	-	-	-
2.3) PE110 - Propellers and Shafts - LHA6/LHD8 Blade Set (15)	A		-	-	-	-	-	-	1,230K	1	1.230	-	-	-	-	-	-	-	-	-
Subtotal: 2) PE110 - Propellers and Shafts - LHA6/LHD8			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***2.585***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) PE110 - Propellers and Shafts - DDG 1000																				
3.1) PE110 - Propellers and Shafts - DDG 1000 Blade Set (16)	A		-	-	-	-	-	-	1,066K	2	2.131	2,228K	1	2.228	-	-	-	2,228K	1	2.228
Subtotal: 3) PE110 - Propellers and Shafts - DDG 1000			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***2.131***	**-**	**-**	***2.228***	**-**	**-**	**-**	**-**	**-**	***2.228***
4) PE110 - Propellers and Shafts - LPD 17 (17)																				
4.1) PE110 - Propellers and Shafts - LPD17 OD Box	A		-	-	-	368,000.00	1	0.368	-	-	-	-	-	-	-	-	-	-	-	-
4.2) PE110 - Propellers and Shafts - LPD17 Blade Set (18)	A		-	-	-	937,500.00	2	1.875	1,004K	2	2.008	-	-	-	-	-	-	-	-	-
4.3) PE110 - Propellers and Shafts LPD17 Hub	A		-	-	-	1,111K	1	1.111	-	-	-	-	-	-	-	-	-	-	-	-
4.4) PE110 Propellers and Shafts LPD 17 Blade Balance Arbor	A		-	-	-	597,000.00	1	0.597	627,000.00	1	0.627	-	-	-	-	-	-	-	-	-
Subtotal: 4) PE110 - Propellers and Shafts - LPD 17			**-**	**-**	***0.000***	**-**	**-**	***3.951***	**-**	**-**	***2.635***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**0.000**	**-**	**-**	**10.139**	**-**	**-**	**11.841**	**-**	**-**	**2.228**	**-**	**-**	**-**	**-**	**-**	**2.228**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	**Aggregated Items Title:** PE110 Propellers and Shafts (11)

(11) Starting in FY22 BLI 0981,PE110 Propellers and Shafts (formerly LT110 under BLI 0981) and PE130 Steam Propulsion Items (formerly LT130 under BLI 0981). The realignment ensures central management and technical cognizance of assets managed by the 2SCOG Marine Propulsion Program, to include Hubs, Oil Distribution (OD) boxes, propellers, and steam equipment. In FY22 the increase is $12.3M to support the procurement of critical Hubs, OD Boxes, Propellers and Steam equipment for Surface Combatants and Amphibious Assault Ships.

(12) Controllable Pitch Propeller asset procurements are to support rotable pools. These spare procurement needs can fluctuate based on fleet size, failure rates, repair turn around time and available budget therefore the procurements are not steady state year to year. Pricing in budget exhibit based on Rolls-Royce Pricing

(13) procurement schedule by asset type is based on rotable pool sparing requirements and available funds

(14) Procurement not required in FY24 for LHA6/LHD8 Hub to complete rotable pool.

(15) Procurement not required in FY24 for LHA6/LHD8 Blade Set to complete rotable pool.

(16) Unit cost increased based on historical vendor data.

(17) procurement schedule by asset type is based on rotable pool sparing requirements and available funds

(18) PE110 LPD 17- Controllable Pitch Propeller asset procurements are to support rotable pools. These spare procurement needs can fluctuate based on fleet size, failure rates, repair turn around time and available budget therefore the procurements are not steady state year to year. Pricing in budget exhibit based on Rolls-Royce Pricing

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	**Aggregated Items Title:** PE130 - Steam Propulsion Items

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) Surface Power Equipment																				
1) Steam Propulsion Items	A		-	-	-	-	-	2.102	-	-	0.242	-	-	0.247	-	-	-	-	-	0.247
Subtotal: 1) Surface Power Equipment			**-**	**-**	***0.000***	**-**	**-**	***2.102***	**-**	**-**	***0.242***	**-**	**-**	***0.247***	**-**	**-**	**-**	**-**	**-**	***0.247***
Total			**-**	**-**	**0.000**	**-**	**-**	**2.102**	**-**	**-**	**0.242**	**-**	**-**	**0.247**	**-**	**-**	**-**	**-**	**-**	**0.247**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	**Modification Number / Title:** 1 / PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	44.397	2.819	5.151	0.609	0.000	0.609	0.000	0.000	0.000	0.000	0.195	53.171
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	44.397	2.819	5.151	0.609	0.000	0.609	0.000	0.000	0.000	0.000	0.195	53.171
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**44.397**	**2.819**	**5.151**	**0.609**	**0.000**	**0.609**	**0.000**	**0.000**	**0.000**	**0.000**	**0.195**	**53.171**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

PE015 - LM2500 DIGITAL FUEL CONTROL (DFC) - This cost code procures the Digital Fuel Control (DFC) shipsets, ancillary equipment and install material to support the CG/DDG modernization schedules. Procurement and installations are budgeted to correspond with CNO ship availabilities. One DFC kit is required to update each of the four LM2500 engines, which makes one DFC shipset. The DFC upgrade is a mandatory portion of DDG-51 modernizations; the modernized machinery control system (MCS)is incapable of interfacing with LM2500 engines not equipped with DFC. The DFC is the most significant change to the LM2500 engine since its inception into the USN that addresses obsolete components which accounted for approximately 40% of all engine failures. In summary, this modification is estimated to be 75% more reliable than the old system. This upgrade also replaces the Hydro-mechanical main fuel control (MFC) system, which was designed for aircraft, with a DFC system designed for a military marine environment. This modification increases engine reliability, decreases periodic maintenance, enhances operational functions, and provides an automatic stall detection and shutdown capability.

PE6IN - INSTALLATION FOR DIGITAL FUEL CONTROL (DFC)- This cost element funds the installation of Cost element PE015, LM2500 Digital Fuel Control (DFC) shipsets, as part of the CG/DDG HM&E modernization program. This includes pre-assembly at NSWCPD (Philadelphia), shipping to installation location, shipboard installation, training, post installation operational testing and associated travel cost.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	**Modification Number / Title:** 1 / PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL												
B Kits												
Recurring												
1.1.1) PE015 DIGITAL FUEL CONTROL SHIPSET/ PE6IN INSTALLATION FOR DFC - NonOrganic (19)	23 / 43.353	1 / 2.295	2 / 4.587	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.195	26 / 50.430
Subtotal: Recurring	*- / 43.353*	*- / 2.295*	*- / 4.587*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.195*	*- / 50.430*
Subtotal: PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL	*23 / 43.353*	*1 / 2.295*	*2 / 4.587*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.195*	*26 / 50.430*
Subtotal: Procurement, All Modification Items	*- / 43.353*	*- / 2.295*	*- / 4.587*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.195*	*- / 50.430*
Installation												
Modification Item 1 of 1: PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL	- / 1.044	- / 0.524	- / 0.564	- / 0.609	- / 0.000	- / 0.609	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.741
Subtotal: Installation	*- / 1.044*	*- / 0.524*	*- / 0.564*	*- / 0.609*	*- / -*	*- / 0.609*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.741*
Total												
Total Cost (Procurement + Support + Installation)	**44.397**	**2.819**	**5.151**	**0.609**	**0.000**	**0.609**	**0.000**	**0.000**	**0.000**	**0.000**	**0.195**	**53.171**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	**Modification Number / Title:** 1 / PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL

Manufacturer Information

Manufacturer Name: General Electric | Manufacturer Location: Cincinnati, OH

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 10

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Feb 2022	Feb 2023					
Delivery Dates	Feb 2023	Feb 2024					

Installation Information

Method of Implementation: GOVERNMENT:: Installation Name: PE015 DIGITAL FUEL CONTROL SHIPSET/ PE6IN INSTALLATION FOR DFC

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	15 / 1.044	4 / 0.524	3 / 0.359	1 / 0.203	0 / 0.000	1 / 0.203	- / -	- / -	- / -	- / -	0 / 0.000	23 / 2.130
FY 2022	- / -	- / -	1 / 0.205	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.205
FY 2023	- / -	- / -	- / -	2 / 0.406	0 / 0.000	2 / 0.406	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.406
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	15 / 1.044	4 / 0.524	4 / 0.564	3 / 0.609	0 / 0.000	3 / 0.609	- / -	- / -	- / -	- / -	0 / 0.000	26 / 2.741

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	15	-	1	2	1	-	1	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26
Out	15	-	1	2	1	-	1	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26

Footnotes:

(19) DFC ship-set procurement and installation costs updated based on actual prior year contract award prices. DFC ship-set installation costs were adjusted from FY20 through FY24 to properly align to the most current DDG 51 Class modernization schedule and accurately reflect the correct distribution of planned procurement and installation dollars based on requirements. DFC Install schedule lags the Procurement

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	**P-1 Line Item Number / Title:** 0131 / Surface Power Equipment	**Modification Number / Title:** 1 / PE015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

schedule by 12-24 months. The procurement schedule for DFC ship sets is dictated by the Department's master schedule for DDG modernizations. The number of DDG modernizations changes from one year to the next based upon ship and dry dock availability.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 2: Generators	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	279.435	78.054	74.585	105.441	0.000	105.441	80.200	76.046	75.247	67.086	7.077	843.171
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	279.435	78.054	74.585	105.441	0.000	105.441	80.200	76.046	75.247	67.086	7.077	843.171
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**279.435**	**78.054**	**74.585**	**105.441**	**0.000**	**105.441**	**80.200**	**76.046**	**75.247**	**67.086**	**7.077**	**843.171**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	1.150	0.038	3.414	-	3.414	0.950	0.848	1.045	1.087	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program allows the Navy to better align and identify Hull, Mechanical & Electrical (HM&E) requirements and shipboard upgrades and equipment. This is in support of the in-service Surface Combatants to include Class Common Equipment (CCE) to support shorter Regular Overhauls and Selected Restricted Availabilities. These include Ship System Components that require long repair turn-around; CG/DDG - Machinery Control Systems (MCS) Commercial off the Shelf (COTS) Refresh; Ship Control Systems (SCS) procurements and installation in support of the SCS.

[P40A / GB001 - CG/DDG COTS Tech Refresh]: Due to Diminishing Manufacturing Sources and Material Shortages (DMSMS), Commercial Off The Shelf (COTS) equipment must be periodically refreshed to ensure supportability to the Fleet. This cost code is used to fund solutions for HM&E systems that have parts with impending DMSMS impacts. DMSMS solutions, including after-market manufacturing (reverse engineering), bridge-buys, life-of-type buys, modernization through replacement, modification / redesign, and reclamation are implemented to ensure that in-service ships are operational and sustainable throughout the life of the system. DMSMS issues and planned resolutions are implemented both within and outside of standard CNO availabilities (Window of Opportunity (WOO) or Continuous Maintenance Availability (CMAV)) and are impacted by pending fact-of-life influences, including shifting availabilities, modified vendor End of Sale dates, and unforeseen material shortages.

[P40A / GB002 - Class Common Equipment]: The Common Class Equipment (CCE) program is to provide Ready-For-Issue (RFI) systems and equipment in support of Surface Combatant ship industrial availabilities and to replace major system equipment which sustains battle damage or major failure. CCE Availability Assets (AAs) ensure warfighting capability, readiness, and on-time deployment by providing RFI long lead time material (LLTM) in case of possible catastrophic damage or major failure on Aegis ships. CCE AAs are procured and stored to support backfit upgrades and emergent maintenance within brief availability windows. The ready accessibility of these assets avoids delays in availability completion caused by lengthy equipment repair turn-around time or acquisition lead time. In addition to AAs, the CCE program also provides for Insurance Assets. These are the major long lead time HM&E equipment/systems, which would prevent a ship from being able to be quickly repaired in order to accomplish its mission due to major damage or battle damage. The CCE program provides for both CG and DDG assets.

[P40A / GB003 - Ship Control Systems (Surface Ship Modernization)]: Funds provide support for the procurement and installation of Ship Control Systems (SCS) upgrades on both cruisers and destroyers in support of the Fleet Modernization Program. Ship Control Systems provide lifecycle support for legacy and modernized engineering controls. SCS equipment and components are procured for various ship changes and engineering change proposals for in-service surface combatants and are installed both within and outside of standard CNO availabilities. This effort includes maintaining Land Based Engineering Sites (LBES), CG / DDG system refresh, SCD design engineering, CG / DDG equipment procurement, and CG / DDG ISEA/ILS support. This cost code also provides for funding the necessary software licenses in support of the HM&E COTS systems/equipment for both CG and DDG class ships. Examples of systems requiring software licenses are: Machinery Control System (MCS) components, Voyage Management System, Integrated Bridge System, Integrated Bridge and Navigation System, and Digital Video Surveillance System.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 2: Generators	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / GB003 - Surface Ship Control System Upgrades for DDG 51 Class]: DDG-51 ship control and bridge information systems are identified by NAVSEA's DDG-51 Class Design Review Board (DRB) as directed in the Comprehensive Review (CR). Funding provides solutions to CR recommendations 7.3.6, 7.3.7, 7.310 and 7.3.11, including: (1) Adding a physical throttle to the Integrated Bridge and Navigation System (IBNS) Ship Control Console (SCC) to augment the current touchscreen (2) Adding a Voyage Data Recorder (VDR) capability (3) Adding two additional aft steering situational awareness cameras into the existing Digital Video Surveillance System (DVSS) (4) Implementing night vision requirements for lighting and glare reduction from bridge equipment (5) Incorporating associated updates to the Steering and Propulsion Control System (SPCS) Computer Program.

[P40A / GB6IN - DDG 51 Class Install (Procured under GB003 3.2)]: Install

FY24: 6; FY25: 5; FY26: 6; FY27: 6; FY28: 4

Increase quantity of 3 in FY23 to 6 in FY24

[P40A / GB004 - Maritime Energy Initiatives (Previously Procured in BLI 0110 and BLI 0120)]: Maritime Energy Initiatives provide surface combatants with technologies/tools that reduce energy usage. This will enhance operational capabilities, allowing for longer time on-station and fewer refuelings. These initiatives will also help meet the CNO's 2020 goal of reducing the surface fleet's fuel usage by 15%. The initiatives consist of: 1) Hull and Hydrodynamics - These initiatives focus on the dynamic forces where the ship contacts the water. They include, but are not limited to hull appendages that reduce drag, thus improving speed and fuel efficiency; 2) Power Generation and Transmission Systems - These initiatives focus on, but are not limited to improving the efficiency of ships' prime movers, generators, main reduction gears, propulsion motors/drives, and shaft-line components; 3) Combat and Ship Systems Support Services - These initiatives focus on, but are not limited to improving systems that use electricity when providing support services (e.g. cooling, heating, air, lube oil) to combat machinery, or life support systems; and 4) Decision Aids - These initiatives will inform the sailor of decisions they can make to save energy and improve operational efficiency by consolidating and manipulating ship data and providing it back as actionable information.

[P40A / GB004 - Shipboard Energy Dashboard FLT IIA Equipment]: The Shipboard Energy Dashboard FLT IIA technology is a shipboard tool providing real time situational awareness of the energy demand associated with equipment lineup and mission. Technology raises operator awareness of how certain engineering plant lineups and equipment affect fuel consumption rates. Energy savings will be realized through energy usage culture change.

[P40A / GB004 - Maritime Energy Initiatives (VSD for CPS)]: The Collective Protective System (CPS) is a full time air filtration system integrated into the ship's HVAC system. The amount of outside supply air delivered to CPS zones varies with filter loading over time and is almost always higher than needed, resulting in above average HVAC loads. Variable Speed Drive (VSD) will be installed as an airflow control component to optimize supply air flow, realizing energy savings from fan motor and reduced HVAC loads.

[P40A / GB004 - Maritime Energy Initiatives (TMCS)]: The Heating, Ventilation, and Air Conditioning (HVAC) system is the largest distributed system on a Surface Combatant and typically consumes between 25% and 40% of all energy used. Surveys on several DDG-class ships indicate that average space temperatures across the ship were being maintained well below the design temperature. Thermal Management Control System (TMCS) provides centralized control and monitoring of space temperatures at design set-points for each compartment throughout the ship. This technology enables improved operational efficiency of the HVAC system, thereby lowering AC loads and reducing electrical demand.

[P40A / GB005 - HM&E Condition System]: This solution proposed would implement HM&E principles, it would implement a Defense-in-Depth Functional Implementation Architecture (DFIA) and meet the requirements of the standards released by the Information Assurance Technical Authority Board (IA TAB) across all the HM&E systems deploying the ability to protect, detect, react, and restore in a contested environment. The HM&E Condition System will monitor the signals on the HM&E network, both between HM&E systems and also those coming from other functional domains.

[P40A / GB006 - Hybrid Electric Drive]: Congressional Plus Up for Hybrid Electric Drive (HED).

[P40A / GB443 - Bridge Integration - Ship Control Systems (BI-SCS)]: In FY24, Cost Code GB443 is established to transfer the tasking and funding from NAVSEA SEA21/PMS407 managed Cost Code GB003 to NAVSEA SEA21/PMS443. FY23 and prior-year efforts remain under Cost Code GB003. The newly assigned Program Office required the creation of the new Cost Code GB443, and subsequent realignment

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 2: Generators	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

of funds within this Budget Line Item for execution, tracking, and reporting by the appropriate Program Office. Additionally, the N95 and N96 OPNAV Resource Sponsors added additional funds FY25 and out to support these efforts.

Funding provides solutions to Comprehensive Review recommendations 7.3.6, 7.3.7, 7.310, and 7.3.11 for DDG-51 ship control and bridge information systems as identified by NAVSEA's DDG-51 Class Design Review Board (DRB) across six major areas of focus including: Adding a physical throttle to the Integrated Bridge and Navigation System (IBNS) Ship Control Console (SCC) to augment the current touchscreen; Adding a Voyage Data Recorder (VDR) capability; Adding two additional aft steering situational awareness cameras into the existing Digital Video Surveillance System (DVSS); Implementing night vision requirements for lighting and glare reduction from bridge equipment; replace troubled Original Equipment Manufacturing (OEM) developed Steering and Propulsion Control System (SPCS) Computer Program with Ship Control System-Government owned (SCS-GOV) Software; Implementing a Bridge Lighting and Display strategy to enhance display visibility during day and nighttime operations, as well as maintain warfighter night vision during night operations.

[P40A / DDG-51 Flight III Unique System Battle Spares]: GB008 DDG-51 Flight III Unique System Battle Spares. The Battle Spare procurement is to provide Fleet Commanders the ability to repair major system equipment unique to the Flight III ship configuration in the event of battle damage or major failure. Procurements support long lead-time HM&E systems that would not otherwise be available to support quick repairs to operational ships. These systems include but are not limited to: Power Control Monitors (PCMs), Ship Service Gas Turbine Generators (SSGTGs), Water Mist, High Efficiency Super Capacity (HES-C), and 4160 Switchboards and Load centers.

[P3A / GB003 - Twisted Rudder]: GB003 - DDG 51 Class has implemented the use of Twisted Rudders to reduce the impact of cavitation, which will reduce the need for inspection and maintenance of the rudders. Cavitation causes early wear and tear on rudders, increasing the inspection and maintenance requirements. It will also have a secondary affect by reducing the noise that is usually generated by the cavitation which will increase the performance of its ships primary mission.

[P3A - 2 / GB004 - Maritime Energy Initiatives (SSL)]: Solid State Lighting (SSL) lamps consist of individual Light Emitting Diodes (LEDs), which serve as replacements for incandescent and fluorescent lighting fixtures. SSL replacements are engineered to meet military specifications.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 2: Generators	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Surface Combatant HM&E				- / 253.246	- / 71.388	- / 69.590	- / 105.441	- / -	- / 105.441
P-3a	1 / GB003 - Twisted Rudder (TBD)				- / 5.559	- / 6.666	- / 4.995	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / GB004 - Maritime Energy Initiatives (SSL) (TBD)				- / 20.630	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 279.435**	**- / 78.054**	**- / 74.585**	**- / 105.441**	**- / 0.000**	**- / 105.441**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Surface Combatant HM&E				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / GB003 - Twisted Rudder (TBD)				- / 4.839	- / 2.386	- / 1.405	- / 0.000	- / 7.077	- / 32.927
P-3a	2 / GB004 - Maritime Energy Initiatives (SSL) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 20.630
P-40	**Total Gross/Weapon System Cost**				**- / 80.200**	**- / 76.046**	**- / 75.247**	**- / 67.086**	**- / 7.077**	**- / 843.171**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The overall $30.856M increase from FY23 to FY24 is due to inflation growth and $29.081M battle spare funding. The Battle Spare procurement is to provide Fleet Commanders the ability to repair major system equipment unique to the Flight III ship configuration in the event of battle damage or major failure. Procurements support long lead-time HM&E systems that would not otherwise be available to support quick repairs to operational ships. These systems include but are not limited to: Power Control Monitors (PCMs), Ship Service Gas Turbine Generators (SSGTGs), Water Mist, High Efficiency Super Capacity (HES-C), and 4160 Switchboards and Load centers.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Aggregated Items Title:** Surface Combatant HM&E

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) GB001 - CG/DDG COTS Tech Refresh																				
1.1) GB001 - CG/DDG COTS Tech Refresh	A		-	-	34.034	-	-	2.280	-	-	1.388	-	-	0.870	-	-	-	-	-	0.870
Subtotal: 1) GB001 - CG/DDG COTS Tech Refresh			**-**	**-**	***34.034***	**-**	**-**	***2.280***	**-**	**-**	***1.388***	**-**	**-**	***0.870***	**-**	**-**	**-**	**-**	**-**	***0.870***
2) GB002 - Class Common Equipment																				
2.1) GB002 - Class Common Equipment	A		-	-	15.662	-	-	0.849	-	-	0.742	-	-	1.043	-	-	-	-	-	1.043
Subtotal: 2) GB002 - Class Common Equipment			**-**	**-**	***15.662***	**-**	**-**	***0.849***	**-**	**-**	***0.742***	**-**	**-**	***1.043***	**-**	**-**	**-**	**-**	**-**	***1.043***
3) GB003 - Ship Control Systems (Surface Ship Modernization) (1)																				
3.1) GB003 - CG 47 Class (Installed under GB6IN 3.5) (2)	A		-	-	9.407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) GB003 - DDG 51 Class (Installed under GB6IN 3.6) (3)	A		-	-	27.302	-	-	9.065	-	-	4.853	-	-	16.024	-	-	-	-	-	16.024
3.3) GB003 - Ship Control Systems Software Licenses	A		-	-	3.149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.4) GB003 - Surface Ship Control System Upgrades for DDG 51 Class (4)	A		-	-	27.385	-	-	23.958	-	-	23.175	-	-	-	-	-	-	-	-	-
3.5) GB6IN - CG 47 Class Install (Procured under GB003 3.1)	A		-	-	6.200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.6) GB6IN - DDG 51 Class Install (Procured under GB003 3.2)	A		-	-	14.353	-	-	5.376	-	-	6.543	-	-	7.803	-	-	-	-	-	7.803
Subtotal: 3) GB003 - Ship Control Systems (Surface Ship Modernization)			**-**	**-**	***87.796***	**-**	**-**	***38.399***	**-**	**-**	***34.571***	**-**	**-**	***23.827***	**-**	**-**	**-**	**-**	**-**	***23.827***
4) GB004 - Maritime Energy Initiatives (Previously Procured in BLI 0110 and BLI 0120)																				
4.1) GB004 - Shipboard Energy Dashboard FLT IIA Equipment	A		-	-	1.330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) GB004 - Maritime Energy Initiatives (VSD for CPS)	A		-	-	14.671	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Aggregated Items Title:** Surface Combatant HM&E

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
4.3) GB004 - Maritime Energy Initiatives (TMCS)	A		-	-	34.338	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.4) GB004 - Maritime Energy Initiative Install (Procured prior to transfer)	A		-	-	2.778	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) GB004 - Maritime Energy Initiatives (Previously Procured in BLI 0110 and BLI 0120)			**-**	**-**	***53.117***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) GB005 - HM&E Condition System																				
5.1) GB005 - HM&E Condition System	A		-	-	27.637	-	-	22.860	-	-	32.889	-	-	22.818	-	-	-	-	-	22.818
Subtotal: 5) GB005 - HM&E Condition System			**-**	**-**	***27.637***	**-**	**-**	***22.860***	**-**	**-**	***32.889***	**-**	**-**	***22.818***	**-**	**-**	**-**	**-**	**-**	***22.818***
6) GB006 - Hybrid Electric Drive																				
6.1) GB006 - Hybrid Electric Drive	A		-	-	35.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) GB006 - Hybrid Electric Drive			**-**	**-**	***35.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
7) GB007 - DDG51 Advanced Degaussing																				
7.1) DDG 51 Advanced Degaussing	A		-	-	-	-	-	7.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) GB007 - DDG51 Advanced Degaussing			**-**	**-**	***0.000***	**-**	**-**	***7.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
8) GB443 - Bridge Integration - Ship Control Systems (BI-SCS)																				
8.1) Amphibious Bridge Integration - Ship Control Systems (BI-SCS)	A		-	-	-	-	-	-	-	-	-	-	-	4.754	-	-	-	-	-	4.754
8.2) Combatant Bridge Integration - Ship Control Systems (BI-SCS)	A		-	-	-	-	-	-	-	-	-	-	-	23.048	-	-	-	-	-	23.048
Subtotal: 8) GB443 - Bridge Integration - Ship Control Systems (BI-SCS)			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***27.802***	**-**	**-**	**-**	**-**	**-**	***27.802***
9) GB008 DDG-51 Flight III Unique System Battle Spares																				
9.1) DDG-51 Flight III Unique System Battle Spares	A		-	-	-	-	-	-	-	-	-	-	-	29.081	-	-	-	-	-	29.081
Subtotal: 9) GB008 DDG-51 Flight III Unique System Battle Spares			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***29.081***	**-**	**-**	**-**	**-**	**-**	***29.081***
Total			**-**	**-**	**253.246**	**-**	**-**	**71.388**	**-**	**-**	**69.590**	**-**	**-**	**105.441**	**-**	**-**	**-**	**-**	**-**	**105.441**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Aggregated Items Title:** Surface Combatant HM&E

Footnotes:

(1) Procurements in cost code GB003 are dependent upon the specific alterations to be accomplished and an individual ship's configuration. Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Quantity of "1" represents the total value of multiple shipsets purchased on multiple contracts for multiple ships. Unit costs for specific alterations are not associated with cost code GB003 due to the varying degree of engineering changes required per ship (ship configuration dependent) and the installation normally occurs outside of CNO availabilities, in either a WOO or CMAV.

(2) GB003 Scheduled Procurements for CG 47 Class (To be installed under GB6IN 5.1): FY27: Procurement funds move to DDG 51 Class due to CG 47 Class decom schedule.

(3) GB003 Scheduled Procurements for DDG 51 Class (To be installed under GB6IN 5.2): Procurement FY23: 3; FY24: 6; FY25: 6; FY26: 4; FY27: 4; FY28: 4 Increase Procurements from FY23 of 3 to 6 in FY24.

(4) In FY23 and prior years, DDG-51 ship control and bridge information systems identified by NAVSEA's DDG-51 Class Design Review Board (DRB) as directed in the Comprehensive Review (CR) were being funded under this Cost Code GB003, and shift to Cost Code GB443 effective FY24 and out to align to the correct NAVSEA Program Office. These funds provide solutions to CR recommendations 7.3.6, 7.3.7, 7.310 and 7.3.11, including: Adding a physical throttle to the Integrated Bridge and Navigation System (IBNS) Ship Control Console (SCC) to augment the current touchscreen; Adding a Voyage Data Recorder (VDR) capability; Adding two additional aft steering situational awareness cameras into the existing Digital Video Surveillance System (DVSS); Implementing night vision requirements for lighting and glare reduction from bridge equipment; Incorporating associated updates to the Steering and Propulsion Control System (SPCS) Computer Program. Surface ship control system upgrades include modifications of the DDG-51 ship control console to install physical throttles and Voyage Data Recorders as identified by NAVSEA's DDG-51 Class Design Review Board, which was directed by the Navy's Comprehensive Review (CR) of the USS MCCAIN and USS FITZGERALD collisions.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Modification Number / Title:** 1 / GB003 - Twisted Rudder
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	5.559	6.666	4.995	0.000	0.000	0.000	4.839	2.386	1.405	0.000	7.077	32.927
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	5.559	6.666	4.995	0.000	0.000	0.000	4.839	2.386	1.405	0.000	7.077	32.927
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**5.559**	**6.666**	**4.995**	**0.000**	**0.000**	**0.000**	**4.839**	**2.386**	**1.405**	**0.000**	**7.077**	**32.927**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DDG 51 Class has implemented the use of Twisted Rudders to reduce the impact of cavitation, which will reduce the need for inspection and maintenance of the rudders. Cavitation causes early wear and tear on rudders, increasing the inspection and maintenance requirements. It will also have a secondary affect by reducing the noise that is usually generated by the cavitation, which will increase the performance of its ships primary mission.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Modification Number / Title:** 1 / GB003 - Twisted Rudder
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: GB003 - Twisted Rudder												
A Kits												
Recurring												
1.1.1) Twisted Rudder - NonOrganic	2 / 4.157	3 / 6.366	1 / 2.167	1 / 0.000	- / -	1 / 0.000	1 / 2.139	1 / 2.086	- / -	- / -	- / 1.500	9 / 18.415
Subtotal: Recurring	*- / 4.157*	*- / 6.366*	*- / 2.167*	*- / -*	*- / -*	*- / -*	*- / 2.139*	*- / 2.086*	*- / -*	*- / -*	*- / 1.500*	*- / 18.415*
Subtotal: GB003 - Twisted Rudder	*2 / 4.157*	*3 / 6.366*	*1 / 2.167*	*1 / 0.000*	*- / -*	*1 / 0.000*	*1 / 2.139*	*1 / 2.086*	*- / -*	*- / -*	*- / 1.500*	*9 / 18.415*
Subtotal: Procurement, All Modification Items	*- / 4.157*	*- / 6.366*	*- / 2.167*	*- / -*	*- / -*	*- / -*	*- / 2.139*	*- / 2.086*	*- / -*	*- / -*	*- / 1.500*	*- / 18.415*
Support *(All Modification Items)*												
3.1) Engineering Services- Non Recurring	- / 1.311	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.311
Subtotal: Support	*- / 1.311*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.311*
Installation												
Modification Item 1 of 1: GB003 - Twisted Rudder	- / 0.091	- / 0.300	- / 2.828	- / 0.000	- / 0.000	- / 0.000	- / 2.700	- / 0.300	- / 1.405	- / 0.000	- / 5.577	- / 13.201
Subtotal: Installation	*- / 0.091*	*- / 0.300*	*- / 2.828*	*- / -*	*- / -*	*- / -*	*- / 2.700*	*- / 0.300*	*- / 1.405*	*- / -*	*- / 5.577*	*- / 13.201*
Total												
Total Cost (Procurement + Support + Installation)	**5.559**	**6.666**	**4.995**	**0.000**	**0.000**	**0.000**	**4.839**	**2.386**	**1.405**	**0.000**	**7.077**	**32.927**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Modification Number / Title:** 1 / GB003 - Twisted Rudder
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: GB003 - Twisted Rudder

Manufacturer Information

Manufacturer Name: Bath Iron Works (BIW)	Manufacturer Location: Bath, ME
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 26

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Feb 2023	Feb 2024	Mar 2025	Feb 2026		
Delivery Dates	Jun 2024	May 2025	May 2026	Jun 2027	May 2028		

Installation Information

Method of Implementation: [none specified]:: Installation Name: Twisted Rudder

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 0.091	0 / 0.300	2 / 2.378	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.769
FY 2022	- / -	- / -	0 / 0.450	- / -	- / -	- / -	3 / 1.350	- / -	- / -	- / -	0 / 0.000	3 / 1.800
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.350	- / -	- / -	- / -	0 / 0.000	1 / 1.350
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.377	1 / 1.377
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.300	1 / 1.405	- / -	0 / 2.700	1 / 4.405
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.500	1 / 1.500
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.091	0 / 0.300	2 / 2.828	- / -	- / -	- / -	4 / 2.700	0 / 0.300	1 / 1.405	- / -	2 / 5.577	9 / 13.201

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	2	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	1	-	-	-	-	-	2	9
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-	1	-	-	-	-	5	9

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Modification Number / Title:** 2 / GB004 - Maritime Energy Initiatives (SSL)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	20.630	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.630
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	20.630	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.630
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**20.630**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**20.630**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Solid State Lighting (SSL) lamps consist of individual Light Emitting Diodes (LEDs), which serve as replacements for incandescent and fluorescent lighting fixtures. SSL replacements are engineered to meet military specifications. SSL replacements for incandescent and fluorescent fixtures reduce energy usage by approximately 85% and 50%, respectively. Additionally, this install will drastically reduce the electrical lighting load, maintenance actions, and the space needed for spare parts.

Engineering Services:
It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS).

Five (5) elements and approximate breakdown is as follows:

Production Engineering includes preparation; test and technical evaluation of engineering changes to correct deficiencies in the production items; production configuration control; review and evaluation of production design data and documentation; and logistic supportability efforts.

Quality Assurance includes the preparation of procedures and the conducting of inspections, examinations and tests during production that are necessary to deliver an item of the required quality as specified by the terms of the contract.

Product Improvement includes improving reliability/maintainability/availability and the correction of deficiencies exclusive of contractual specifications.

Acceptance Test and Evaluation of a production item includes preparation of test plans, testing, data analysis, and data evaluation.

Contractor Engineering and Technical Services (CETS) includes the furnishing of advice, instruction, and training by commercial or industrial companies.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Modification Number / Title:** 2 / GB004 - Maritime Energy Initiatives (SSL)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (SSL)												
B Kits												
Recurring												
1.1.1) Solid State Lighting Equipment - NonOrganic	20 / 10.008	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 10.008
1.1.2) Hanger Bay Solid State Lighting Equipment (SSL) - NonOrganic	6 / 0.253	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.253
Subtotal: Recurring	*- / 10.261*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 10.261*
Subtotal: GB004 - Maritime Energy Initiatives (SSL)	*26 / 10.261*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*26 / 10.261*
Subtotal: Procurement, All Modification Items	*- / 10.261*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 10.261*
Support *(All Modification Items)*												
2.1) Solid State Lighting Engineering Services	- / 0.346	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.346
Subtotal: Support	*- / 0.346*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.346*
Installation												
Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (SSL)	- / 10.023	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 10.023
Subtotal: Installation	*- / 10.023*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 10.023*
Total												
Total Cost (Procurement + Support + Installation)	**20.630**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**20.630**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Modification Number / Title:** 2 / GB004 - Maritime Energy Initiatives (SSL)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (SSL)

Manufacturer Information

Manufacturer Name: Energy Focus Inc. | Manufacturer Location: Solon, OH

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: Solid State Lighting Equipment

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	20 / 9.455	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 9.455
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	20 / 9.455	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 9.455

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
Out	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	**P-1 Line Item Number / Title:** 0200 / Surface Combatant HM&E	**Modification Number / Title:** 2 / GB004 - Maritime Energy Initiatives (SSL)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (SSL)

Installation Information

Method of Implementation: [none specified]:: Installation Name: Hanger Bay Solid State Lighting Equipment (SSL)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	6 / 0.568	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.568
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 0.568	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.568

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Out	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	673.907	72.300	87.800	110.286	0.000	110.286	91.772	100.724	84.649	87.303	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	673.907	72.300	87.800	110.286	0.000	110.286	91.772	100.724	84.649	87.303	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**673.907**	**72.300**	**87.800**	**110.286**	**0.000**	**110.286**	**91.772**	**100.724**	**84.649**	**87.303**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	1.475	2.448	5.422	-	5.422	1.883	5.063	5.022	0.971	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

TOA increase of $22.486M from FY23 to FY24 as a result of:
1. FY23 to FY24 increase to NCDS ($13.17M) for Navigation Critical Distribution Systems (NCDS) procurement & installation on LHA/LHD/LPD Class warships
2. FY23 to FY24 net increase ($4.275M) to reflect planned procurement and installation requirements for NCDS, ACNS, Navy ECDIS
3. FY24 NWCF Rate, Civilian Pay Rate, Misc Rate Adjustments net increase ($5.041M)
4. FY23 Budget was reduced by a total of $10.279M

This program provides procurement and improvements of navigation equipment to include Inertial Navigation equipment such as gyrocompasses, speed sensors, Electronic Chart Display and Information System (ECDIS) and major components for other navigation systems. ECDIS provides Fleet-wide electronic charting capability, increases navigation and situational awareness, improves safety at sea, and eliminates reliance on paper charts. These systems provide mission critical navigation data to shipboard combat and weapon systems.

[P40A / GW054: NAVIGATION TRAINING EQUIPMENT]: Funds are required for the procurement of training equipment for multiple Navigation classrooms in support of Navigation System Technician pipeline maintenance training and ECDIS Operator Training. This includes computer upgrades and software licenses. These upgrades are critical to maintaining Fleet proficiency on operation and maintenance of navigation systems. Field Changes include ECDIS Operator Course Classroom Tech Refresh and additional seats and licenses and upgrade/update Mariner Skills Simulator (MSS) to support Fleet Training Requirements (Radar/Data bases/Models).

[P40A / GW063: NAVIGATION CERTIFICATION]: These funds are required for conducting Navigation Certification (NAVCERT) on surface ships, submarines, and carriers as part of fielded upgrades and tech refresh. NAVCERT funding amount varies each fiscal year based on the number and type of equipment and/or field changes installed, the ship class, and location.

[P40A / GW065: NAVIGATION SHORESITE EQUIPMENT]: These funds are required for the procurement and Non Recurring Engineering (NRE)/ Integrated Logistics Support (ILS)/Support of navigation system shoresite equipment. Shoresite equipment does not have any associated installation costs. There are no plans to procure and/or install this equipment in FY 2024.

[P40A / GW066: SSBN NAVIGATION SENSOR OBSOLESCENCE]: These funds are required for Procurement and NRE/ILS/Support of replacement Navigation Sensors on SSBN Platforms.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / GW068: NAVIGATION CERTIFICATION SUITE]: These funds are required for the procurement of hardware and software to maintain and upgrade a land-based Navigation Certification Suite lab to verify navigation equipment field changes and tech refresh interoperability with existing systems prior to shipboard installation.

[P40A / GW830: PRODUCTION ENGINEERING]: These funds are required for the production engineering support of all navigation system hardware, software, and tech refresh procurements and system test and integration. This Cost Element includes indirect costs associated with the procurement and installation of individual field changes and upgrades. These costs would include field change and upgrade support, consolidated engineering support, Program Office support, and other costs. These costs will fluctuate with increases and decreases of overall budget, number and type of field changes and upgrades, and required support.

[P40A / GW Completed P3As]: NAVSSI Capstone (GW058) - Capture Prior Year Historical totals for completed P3A effort. See prior submissions for details on this completed P3A effort
Next Generation Fathometer (GW060) - Capture Prior Year Historical totals for completed P3A effort. See prior submissions for details on this completed P3A effort

[P40A / NAVSSI Capstone (GW 058) Prior Year Historical]: Completed P3A Prior Year totals for GW 058 NAVSSI Capstone. See prior year budgets for details on this P3A cost element

[P40A / Next Generation Fathometer (GW 060) Prior Year Historical]: Completed P3A Prior Year totals for GW 060 Next Generation Fathometer. See prior year budgets for details on this P3A cost element

[P3A / GW036: AN/WSN-7B]: These funds are required for the procurement and installation of the AN/WSN-7B Ring Laser Gyrocompass (RLG) for SSNs and LSD class ships. System peripherals include Sync Amps, BIT Cables, and installation kits. Also, provides funding for part obsolescence solutions to maintain manufacturing capability.

[P3A - 2 / GW051: ECDIS-N MODERNIZATION]: These funds are for the procurement and installation of ECDIS-N hardware and software Tech Refresh on amphibious, surface, and carrier platforms. Starting in FY22, Navy ECDIS is going to replace ECDIS-N. Funds are still required in FY23 to support fleet requirements until the transition to Navy ECDIS is completed.

[P3A - 3 / GW053: AN/WSN-12]: These funds are for the procurement and installation of AN/WSN-12 Inertial Navigation System - Replacement (INS-R) on surface ships, submarines, and carriers.

[P3A - 4 / GW055: SPEED LOGS]: These funds are for the procurement and installation of Speed Log upgrades and Tech Refresh on surface ships, submarines, and carriers.

[P3A - 5 / GW056: NAVY ECDIS]: These funds are required for the software build, procurement, and installation of Navy ECDIS hardware and software to replace legacy ECDIS-N capability on surface ships and carriers.

[P3A - 6 / GW061: MK 27 REPLACEMENT]: These funds are required for the procurement and installation of AN/WSN-11 replacement for legacy MK27 Backup Heading Reference systems on surface ships and submarines.

[P3A - 7 / GW062: AN/WSN-7 MODERNIZATION]: These funds are required for the procurement and installation of field changes, upgrades, and Tech Refresh of AN/WSN-7 Inertial Navigation System on surface ships, submarines, and carriers.

[P3A - 8 / GW067: DIGITAL DEPTH DETECTOR]: This effort has been completed as of FY22 and no further funding is required under OPN LI 0670 budget.
These funds are required for the procurement and installation of Digital Depth Detector to replace legacy depth detectors on submarines.

[P3A - 9 / GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)]: This Cost Element was previously labeled as BOUNDARY DEFENSE CABINET.
These funds are required for the procurement and installation of the ANCHOR system on surface ships for cyber protection pursuant to the establishment of Defense-in-Depth Functional Implementation Architecture (DFIA) compliant Navigation Enclaves.
To increase overall Navy cybersecurity efficiency, starting in FY24, the cybersecurity work associated with the Afloat Navigation Cyber Hardening, Observation, and Response (ANCHOR) program will be executed by Situational Awareness Boundary Enforcement and Response (SABER). SABER is the research, design, development, testing, and installation of Cybersecurity solutions for installed integrated

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

computer networks to include shipboard Hull Mechanical and Electrical (HM&E), Navigation Systems, Combat Systems, Fire Control, Sonar, Radar, Communications and other shipboard computerized control systems for all afloat U.S. Navy platforms

[P3A - 10 / GW070: MILITARY GLOBAL POSITIONING SYSTEM (GPS) USER EQUIPMENT (MGUE)]: This Cost Element reflects a transition from development(PE 0204228N) to production in FY 2023.

These funds are required for the procurement and installation of Military GPS User Equipment on submarines.

[P3A - 11 / GW071: NAVIGATION NETWORKS]: GW071 title change from Navigation Critical Distribution System to Navigation Networks to incorporate NCDS and NDDS.
This Cost Element was added in PB22 cycle with funding and program responsibility transferred from LI 0946 (NAVIGATION DATA DISTRIBUTION SYSTEM (NDDS) NETWORK INSTALLATION) and LI 0933 (Navigation Critical Data Distribution (NavCrit)) to LI 0670 starting in FY23.
These funds are required for the procurement and installation of Navigation Critical Distribution System (NCDS) and Navigation Data Distribution System (NDDS) on amphibious ships and carriers.

[P3A - 12 / GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM]: This Cost Element reflects a transition from development(PE 0204228N) to production in FY 2023.

These funds are required for the procurement and installation of Automated Celestial Navigation System (ACNS) on surface ships.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment

P-1 Line Item Number / Title:
0670 / Other Navigation Equipment

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	Other Navigation Equipment				- / 366.152	- / 9.679	- / 19.266	- / 28.470	- / -	- / 28.470
P-3a	1 / GW036: AN/WSN-7B (AN/WSN-7B)				- / 71.221	- / 2.788	- / 0.815	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / GW051: ECDIS-N MODERNIZATION (ECDIS-N MODERNIZATION)				- / 39.894	- / 15.645	- / 2.279	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / GW053: AN/WSN-12 (AN/WSN-12)				- / 11.780	- / 21.250	- / 26.700	- / 13.065	- / 0.000	- / 13.065
P-3a	4 / GW055: SPEED LOGS (SPEED LOGS)				- / 46.971	- / 3.956	- / 2.584	- / 0.891	- / 0.000	- / 0.891
P-3a	5 / GW056: NAVY ECDIS (NAVY ECDIS)				- / 63.171	- / 6.250	- / 10.227	- / 19.861	- / 0.000	- / 19.861
P-3a	6 / GW061: MK 27 REPLACEMENT (MK 27 REPLACEMENT)				- / 8.878	- / 0.219	- / 0.160	- / 0.326	- / 0.000	- / 0.326
P-3a	7 / GW062: AN/WSN-7 MODERNIZATION (AN/WSN-7 MODERNIZATION)				- / 40.356	- / 12.368	- / 8.944	- / 6.895	- / 0.000	- / 6.895
P-3a	8 / GW067: DIGITAL DEPTH DETECTOR (DIGITAL DEPTH DETECTOR)				- / 4.289	- / 0.145	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	9 / GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR) (AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR))				- / 21.195	- / 0.000	- / 4.039	- / 1.648	- / 0.000	- / 1.648
P-3a	10 / GW070: MILITARY GLOBAL POSITIONING SYSTEM (GPS) USER EQUIPMENT (MGUE) (MILITARY GPS USER EQUIPMENT)				- / 0.000	- / 0.000	- / 0.208	- / 0.265	- / 0.000	- / 0.265
P-3a	11 / GW071: NAVIGATION NETWORKS (GW071: NAVIGATION NETWORKS)				- / 0.000	- / 0.000	- / 5.234	- / 30.542	- / 0.000	- / 30.542
P-3a	12 / GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM (GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM)				- / 0.000	- / 0.000	- / 7.344	- / 8.323	- / 0.000	- / 8.323
P-40	**Total Gross/Weapon System Cost**				**- / 673.907**	**- / 72.300**	**- / 87.800**	**- / 110.286**	**- / 0.000**	**- / 110.286**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	Other Navigation Equipment				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / GW036: AN/WSN-7B (AN/WSN-7B)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 74.824
P-3a	2 / GW051: ECDIS-N MODERNIZATION (ECDIS-N MODERNIZATION)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 57.818
P-3a	3 / GW053: AN/WSN-12 (AN/WSN-12)				- / 11.860	- / 28.387	- / 30.471	- / 28.247	Continuing	Continuing
P-3a	4 / GW055: SPEED LOGS (SPEED LOGS)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 54.402
P-3a	5 / GW056: NAVY ECDIS (NAVY ECDIS)				- / 22.849	- / 10.649	- / 10.089	- / 11.172	Continuing	Continuing
P-3a	6 / GW061: MK 27 REPLACEMENT (MK 27 REPLACEMENT)				- / 0.332	- / 0.169	- / 0.000	- / 0.000	- / 0.000	- / 10.084
P-3a	7 / GW062: AN/WSN-7 MODERNIZATION (AN/WSN-7 MODERNIZATION)				- / 6.780	- / 6.068	- / 6.076	- / 5.495	Continuing	Continuing

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A / **Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A	

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	8 / GW067: DIGITAL DEPTH DETECTOR (DIGITAL DEPTH DETECTOR)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.434
P-3a	9 / GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR) (AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR))				- / 5.758	- / 7.322	- / 8.141	- / 10.160	- / 13.867	- / 72.130
P-3a	10 / GW070: MILITARY GLOBAL POSITIONING SYSTEM (GPS) USER EQUIPMENT (MGUE) (MILITARY GPS USER EQUIPMENT)				- / 0.271	- / 0.331	- / 0.000	- / 0.000	- / 0.000	- / 1.075
P-3a	11 / GW071: NAVIGATION NETWORKS (GW071: NAVIGATION NETWORKS)				- / 15.734	- / 15.677	- / 3.385	- / 0.000	- / 0.000	- / 70.572
P-3a	12 / GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM (GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM)				- / 8.490	- / 10.608	- / 11.041	- / 11.262	- / 1.149	- / 58.217
P-40	**Total Gross/Weapon System Cost**				**- / 91.772**	**- / 100.724**	**- / 84.649**	**- / 87.303**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Aggregated Items Title:** Other Navigation Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) GW013: CONVENTIONAL NAVIGATION FIELD CHANGE KITS																				
1.1) SURFACE CONVENTIONAL NAVIGATION FC KITS	A		-	-	7.824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) SUBMARINE CONVENTIONAL NAVIGATION FC KITS	A		-	-	20.351	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) GW013: CONVENTIONAL NAVIGATION FIELD CHANGE KITS			**-**	**-**	***28.175***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) GW029: INERTIAL NAVIGATION SYSTEMS FIELD CHANGE KITS																				
2.1) SURFACE INERTIAL NAV SYS ECP/FC KITS	A		-	-	21.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) SUBMARINE INERTIAL NAV SYS ECP/FC KITS	A		-	-	38.668	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3) CARRIER INERTIAL NAV SYS ECP/FC KITS	A		-	-	17.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) GW029: INERTIAL NAVIGATION SYSTEMS FIELD CHANGE KITS			**-**	**-**	***76.691***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) GW038: AN/BPS ECDIS-N/VMS FC KITS:																				
3.1) SUBMARINE AN/ BPS ECDIS-N/VMS FC KITS:	A		-	-	44.392	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) GW038: AN/BPS ECDIS-N/VMS FC KITS:			**-**	**-**	***44.392***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) GW051: SCALABLE ECDIS-N ENGINEERING CHANGE PROPOSAL (ECP)/FIELD CHANGE KITS:																				
4.1) SURFACE SCALABLE ECDIS-N ECP/ FIELD CHANGE KITS	A		-	-	47.562	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) CARRIER SCALABLE ECDIS-N ECP/FIELD CHANGE KITS:	A		-	-	5.831	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) GW051: SCALABLE ECDIS-N ENGINEERING CHANGE PROPOSAL (ECP)/FIELD CHANGE KITS:			**-**	**-**	***53.393***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) GW054: NAVIGATION TRAINING EQUIPMENT																				
5.1) SURFACE NAVIGATION	A		-	-	6.479	-	-	0.662	-	-	0.675	-	-	0.689	-	-	-	-	-	0.689

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Aggregated Items Title: Other Navigation Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
TRAINING EQUIPMENT																				
Subtotal: 5) GW054: NAVIGATION TRAINING EQUIPMENT			**-**	**-**	***6.479***	**-**	**-**	***0.662***	**-**	**-**	***0.675***	**-**	**-**	***0.689***	**-**	**-**	**-**	**-**	**-**	***0.689***
6) GW059: EMERGENCY NAVIGATION LAPTOP																				
6.1) AMPHIB EMERGENCY NAVIGATION LAPTOP	A		13,450.98	51	0.686	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.2) SURFACE EMERGENCY NAVIGATION LAPTOP	A		13,460.32	189	2.544	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.3) CARRIER EMERGENCY NAVIGATION LAPTOP	A		13,500.00	10	0.135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) GW059: EMERGENCY NAVIGATION LAPTOP			**-**	**-**	***3.365***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
7) GW056 ECDIS-N MODERNIZATION																				
7.1) SURFACE ECDIS-N MODERNIZATION	A		-	-	4.741	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) GW056 ECDIS-N MODERNIZATION			**-**	**-**	***4.741***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
8) GW063: NAVIGATION CERTIFICATION																				
8.1) AMPHIB NAVIGATION CERTIFICATION (1)	A		-	-	6.117	-	-	0.120	-	-	0.176	-	-	0.325	-	-	-	-	-	0.325
8.2) SURFACE NAVIGATION CERTIFICATION (2)	A		-	-	20.075	-	-	0.867	-	-	0.234	-	-	0.737	-	-	-	-	-	0.737
8.3) SUBMARINE NAVIGATION CERTIFICATION (3)	A		-	-	4.590	-	-	0.855	-	-	1.622	-	-	1.232	-	-	-	-	-	1.232
8.4) CARRIER NAVIGATION CERTIFICATION	A		-	-	1.215	-	-	0.105	-	-	0.098	-	-	0.080	-	-	-	-	-	0.080
Subtotal: 8) GW063: NAVIGATION CERTIFICATION			**-**	**-**	***31.997***	**-**	**-**	***1.947***	**-**	**-**	***2.130***	**-**	**-**	***2.374***	**-**	**-**	**-**	**-**	**-**	***2.374***
9) GW064: OWN SHIP SPEED (OSS) AND COURSE REPEATERS																				
9.1) SURFACE OSS AND COURSE REPEATERS (4)	A		-	-	0.335	-	-	0.065	-	-	0.055	-	-	0.330	-	-	-	-	-	0.330

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Aggregated Items Title:** Other Navigation Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Subtotal: 9) GW064: OWN SHIP SPEED (OSS) AND COURSE REPEATERS			**-**	**-**	***0.335***	**-**	**-**	***0.065***	**-**	**-**	***0.055***	**-**	**-**	***0.330***	**-**	**-**	**-**	**-**	**-**	***0.330***
10) GW065: NAVIGATION SHORESITE EQUIPMENT																				
10.1) NAVIGATION SHORESITE EQUIPMENT	A		689,000.00	4	2.756	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 10) GW065: NAVIGATION SHORESITE EQUIPMENT			**-**	**-**	***2.756***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
11) GW066: SSBN NAVIGATION SENSOR OBSOLESCENCE																				
11.1) SSBN NAVIGATION SENSOR OBSOLESCENCE	A		-	-	7.745	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 11) GW066: SSBN NAVIGATION SENSOR OBSOLESCENCE			**-**	**-**	***7.745***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
12) GW068: NAVIGATION CERTIFICATION SUITE																				
12.1) SURFACE NAVIGATION CERTIFICATION SUITE (5)	A		-	-	13.787	-	-	3.000	-	-	3.250	-	-	3.133	-	-	-	-	-	3.133
12.2) SUBMARINE NAVIGATION CERTIFICATION SUITE	A		-	-	5.161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.3) CARRIER NAVIGATION CERTIFICATION SUITE	A		-	-	3.593	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 12) GW068: NAVIGATION CERTIFICATION SUITE			**-**	**-**	***22.541***	**-**	**-**	***3.000***	**-**	**-**	***3.250***	**-**	**-**	***3.133***	**-**	**-**	**-**	**-**	**-**	***3.133***
13) GW830: PRODUCTION ENGINEERING																				
13.1) AMPHIB PRODUCTION ENGINEERING (Navigation Networks) (6)	A		-	-	-	-	-	-	-	-	4.579	-	-	5.721	-	-	-	-	-	5.721
13.2) AMPHIB PRODUCTION ENGINEERING (7)	A		-	-	8.138	-	-	1.757	-	-	1.790	-	-	5.758	-	-	-	-	-	5.758
13.3) SURFACE PRODUCTION ENGINEERING (8)	A		-	-	33.427	-	-	1.792	-	-	4.811	-	-	8.861	-	-	-	-	-	8.861

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Aggregated Items Title: Other Navigation Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
13.4) SUBMARINE PRODUCTION ENGINEERING (9)	A		-	-	15.072	-	-	0.219	-	-	0.957	-	-	1.049	-	-	-	-	-	1.049
13.5) CARRIER PRODUCTION ENGINEERING (10)	A		-	-	5.326	-	-	0.237	-	-	1.019	-	-	0.555	-	-	-	-	-	0.555
Subtotal: 13) GW830: PRODUCTION ENGINEERING			**-**	**-**	***61.963***	**-**	**-**	***4.005***	**-**	**-**	***13.156***	**-**	**-**	***21.944***	**-**	**-**	**-**	**-**	**-**	***21.944***
14) GW Completed P3As (11)																				
14.1) NAVSSI Capstone (GW 058) Prior Year Historical (12)	A		-	-	9.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.2) Next Generation Fathometer (GW 060) Prior Year Historical (13)	A		-	-	12.548	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 14) GW Completed P3As			**-**	**-**	***21.579***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**366.152**	**-**	**-**	**9.679**	**-**	**-**	**19.266**	**-**	**-**	**28.470**	**-**	**-**	**-**	**-**	**-**	**28.470**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) AMPHIB NAVIGATION CERTIFICATION: Increase from FY 2023 to FY 2024 due to more NAV CERT events expected based on NAV fielding plans that fluctuate from year to year.

(2) SURFACE NAVIGATION CERTIFICATION: Increase from FY 2023 to FY 2024 due to more NAV CERT events expected based on NAV fielding plans that fluctuate from year to year.

(3) SUBMARINE NAVIGATION CERTIFICATION: Decrease from FY 2023 to FY 2024 due to fewer NAV CERT events expected based on NAV fielding plans that fluctuate from year to year.

(4) SURFACE OSS AND COURSE REPEATERS: Increase from FY 2023 to FY 2024 due to additional procurement and NRE/ILS/support requirements.

(5) SURFACE NAVIGATION CERTIFICATION SUITE: Decrease from FY 2023 to FY 2024 due to reduction in procurement and engineering support requirements.

(6) AMPHIB PRODUCTION ENGINEERING (Navigation Networks): Increase from FY 2023 to FY 2024 is based on the required engineering support for Navigation Networks in FY 2024 FY23 Budget was reduced by ($4.580M) due to an unjustified request

(7) AMPHIB PRODUCTION ENGINEERING: Increase from FY 2023 to FY 2024 is based on the required engineering support for AMPHIB modernization efforts in FY 2024

(8) SURFACE PRODUCTION ENGINEERING: Increases are due to the fielding of Navy ECDIS, WSN-12, and ACNS.

(9) SUBMARINE PRODUCTION ENGINEERING: Increases are due to the fielding of WSN-12 and WSN-7 FC28.

(10) CARRIER PRODUCTION ENGINEERING: Decreases are due to the fielding of Navy ECDIS hardware and software.

(11) NAVSSI Capstone (GW058) - Capture Prior Year Historical totals for completed P3A effort. See prior submissions for details on this completed P3A effort Next Generation Fathometer (GW060) - Capture Prior Year Historical totals for completed P3A effort. See prior submissions for details on this completed P3A effort

(12) Completed P3A Prior Year totals for GW 058 NAVSSI Capstone. See prior year budgets for details on this P3A cost element

(13) Completed P3A Prior Year totals for GW 060 Next Generation Fathometer. See prior year budgets for details on this P3A cost element

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 1 / GW036: AN/WSN-7B
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	71.221	2.788	0.815	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	74.824
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	71.221	2.788	0.815	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	74.824
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**71.221**	**2.788**	**0.815**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**74.824**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for the procurement and installation of the AN/WSN-7B Ring Laser Gyrocompass (RLG) for SSNs and LSD class ships. System peripherals include Sync Amps, BIT Cables, and installation kits. Also, provides funding for part obsolescence solutions to maintain manufacturing capability.

AN/WSN-7B Field Change 1: Processor upgrade to Rev-N.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 1 / GW036: AN/WSN-7B
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW036: RING LASER GYRO NAVIGATION RING LASER GYROCOMPASS (AN/WSN-7B)	**Modification Type:** AN/WSN-7B	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 2: AMPHIB AN/WSN-7B												
B Kits												
Recurring												
1.1.1) AMPHIB AN/WSN-7B PROCUREMENT - NonOrganic	91 / 38.092	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	91 / 38.092
1.1.2) AMPHIB AN/WSN-7B FIELD CHANGE 1 - NonOrganic	- / -	3 / 0.257	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.257
Subtotal: Recurring	*- / 38.092*	*- / 0.257*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 38.349*
Subtotal: AMPHIB AN/WSN-7B	*91 / 38.092*	*3 / 0.257*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*94 / 38.349*
Modification Item 2 of 2: SUBMARINE AN/WSN-7B												
B Kits												
Recurring												
2.1.1) SUBMARINE AN/WSN-7B FIELD CHANGE 1 - NonOrganic (14)	12 / 0.600	4 / 0.343	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.943
Subtotal: Recurring	*- / 0.600*	*- / 0.343*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.943*
Subtotal: SUBMARINE AN/WSN-7B	*12 / 0.600*	*4 / 0.343*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*16 / 0.943*
Subtotal: Procurement, All Modification Items	*- / 38.692*	*- / 0.600*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 39.292*
Installation												
Modification Item 1 of 2: AMPHIB AN/WSN-7B	- / 32.179	- / 0.938	- / 0.479	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 33.596
Modification Item 2 of 2: SUBMARINE AN/WSN-7B	- / 0.350	- / 1.250	- / 0.336	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.936
Subtotal: Installation	*- / 32.529*	*- / 2.188*	*- / 0.815*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 35.532*
Total												
Total Cost (Procurement + Support + Installation)	**71.221**	**2.788**	**0.815**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**74.824**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 1 / GW036: AN/WSN-7B
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 2: AMPHIB AN/WSN-7B

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Amphib WSN-7B) | Manufacturer Location: CHARLOTTESVILLE, VA

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Manufacturer Name: WR Systems (Amphib WSN-7B FC1) | Manufacturer Location: Norfolk, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB AN/WSN-7B PROCUREMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	91 / 32.179	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	91 / 32.179
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	91 / 32.179	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	91 / 32.179

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91
Out	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 1 / GW036: AN/WSN-7B
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 2: AMPHIB AN/WSN-7B

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB AN/WSN-7B FIELD CHANGE 1

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	2 / 0.938	1 / 0.479	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.417
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / 0.938	1 / 0.479	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.417

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Out	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 1 / GW036: AN/WSN-7B
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 2: SUBMARINE AN/WSN-7B

Manufacturer Information

Manufacturer Name: WR Systems (Sub WSN-7B FC1)	Manufacturer Location: Norfolk, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7B FIELD CHANGE 1

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	7 / 0.350	5 / 1.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.600
FY 2022	- / -	- / -	4 / 0.336	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.336
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 0.350	5 / 1.250	4 / 0.336	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 1.936

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	7	-	5	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Out	7	-	5	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16

Footnotes:

(14) SUBMARINE AN/WSN-7B FIELD CHANGE 1: PLT was corrected from 9 months to 6 months. FY 2023 installation cost decrease due to fact-of-life cost update.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	39.894	15.645	2.279	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	57.818
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	39.894	15.645	2.279	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	57.818
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**39.894**	**15.645**	**2.279**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**57.818**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are for the procurement and installation of ECDIS-N hardware and software Tech Refresh on surface ships and carriers. Starting in FY22, Navy ECDIS is going to replace ECDIS-N. Funds are still required in FY23 to support fleet requirements until the transition to Navy ECDIS is completed.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW051: ECDIS-N MODERNIZATION	**Modification Type:** ECDIS-N MODERNIZATION	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 3: AMPHIB ECDIS-N FIELD CHANGES												
B Kits												
Recurring												
1.1.1) AMPHIB SCALABLE ECDIS-N HARDWARE/ SOFTWARE - NonOrganic (15)	12 / 3.715	1 / 0.220	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 3.935
1.1.2) AMPHIB SCALABLE ECDIS-N SOFTWARE - NonOrganic (16)	11 / 0.000	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.000
Subtotal: Recurring	*- / 3.715*	*- / 0.220*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.935*
Subtotal: AMPHIB ECDIS-N FIELD CHANGES	*23 / 3.715*	*2 / 0.220*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*25 / 3.935*
Modification Item 2 of 3: SURFACE ECDIS-N FIELD CHANGES												
B Kits												
Recurring												
2.1.1) SURFACE INTEGRATED BRIDGE SYSTEM (IBS) HARDWARE/SOFTWARE - NonOrganic (17)	8 / 8.406	8 / 7.248	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 15.654
2.1.2) SURFACE SCALABLE ECDIS-N HARDWARE/ SOFTWARE - NonOrganic	12 / 3.698	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.698
2.1.3) SURFACE SCALABLE ECDIS-N SOFTWARE - NonOrganic (18)	31 / 0.000	10 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 0.000
2.1.4) MCM ECDIS-N HARDWARE/SOFTWARE - Organic	12 / 5.831	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 5.831
2.1.5) MCM ECDIS-N HARDWARE/SOFTWARE INSTALLATION - Organic	12 / 2.578	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.578
2.1.6) PC ECDIS-N HARDWARE/SOFTWARE INSTALLATION - Organic	12 / 0.680	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.680
2.1.7) LCS ECDIS-N HARDWARE/SOFTWARE - NonOrganic (19)	- / -	8 / 1.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.765
Subtotal: Recurring	*- / 21.193*	*- / 9.013*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 30.206*
Subtotal: SURFACE ECDIS-N FIELD CHANGES	*87 / 21.193*	*26 / 9.013*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*113 / 30.206*
Modification Item 3 of 3: CARRIER ECDIS-N FIELD CHANGES												
B Kits												

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW051: ECDIS-N MODERNIZATION	**Modification Type:** ECDIS-N MODERNIZATION	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Recurring												
3.1.1) CARRIER SCALABLE ECDIS-N HARDWARE/ SOFTWARE - NonOrganic (20)	6 / 1.836	1 / 0.337	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.173
3.1.2) CARRIER SCALABLE ECDIS-N SOFTWARE - NonOrganic (21)	8 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.000
Subtotal: Recurring	*- / 1.836*	*- / 0.337*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.173*
Subtotal: CARRIER ECDIS-N FIELD CHANGES	*14 / 1.836*	*1 / 0.337*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*15 / 2.173*
Subtotal: Procurement, All Modification Items	*- / 26.744*	*- / 9.570*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 36.314*
Installation												
Modification Item 1 of 3: AMPHIB ECDIS-N FIELD CHANGES	- / 2.696	- / 0.279	- / 0.031	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.006
Modification Item 2 of 3: SURFACE ECDIS-N FIELD CHANGES	- / 8.894	- / 5.465	- / 2.248	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 16.607
Modification Item 3 of 3: CARRIER ECDIS-N FIELD CHANGES	- / 1.560	- / 0.331	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.891
Subtotal: Installation	*- / 13.150*	*- / 6.075*	*- / 2.279*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 21.504*
Total												
Total Cost (Procurement + Support + Installation)	**39.894**	**15.645**	**2.279**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**57.818**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 3: AMPHIB ECDIS-N FIELD CHANGES

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Amphib Scalable SW)	Manufacturer Location: CHARLOTTESVILLE, VA
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Amphib Scalable HW/SW)	Manufacturer Location: CHARLOTTESVILLE, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB SCALABLE ECDIS-N HARDWARE/SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	12 / 2.477	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 2.477
FY 2022	- / -	1 / 0.154	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.154
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	12 / 2.477	1 / 0.154	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	13 / 2.631

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	12	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Out	12	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 3: AMPHIB ECDIS-N FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB SCALABLE ECDIS-N SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	7 / 0.219	4 / 0.125	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 0.344
FY 2022	- / -	- / -	1 / 0.031	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.031
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 0.219	4 / 0.125	1 / 0.031	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.375

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	7	4	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	7	4	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 3: SURFACE ECDIS-N FIELD CHANGES

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (IBS HW/SW)				Manufacturer Location: CHARLOTTESVILLE, VA			
Administrative Leadtime *(in Months)*: 3				Production Leadtime *(in Months)*: 6			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (LCS ECDIS-N)				Manufacturer Location: CHARLOTTESVILLE, VA			
Administrative Leadtime *(in Months)*: 3				Production Leadtime *(in Months)*: 6			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Surf Scalable SW)				Manufacturer Location: CHARLOTTESVILLE, VA			
Administrative Leadtime *(in Months)*: 3				Production Leadtime *(in Months)*: 6			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Surf Scalable HW/SW)				Manufacturer Location: CHARLOTTESVILLE, VA			
Administrative Leadtime *(in Months)*: 3				Production Leadtime *(in Months)*: 6			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates							
Delivery Dates							

Manufacturer Name: TBD				Manufacturer Location: TBD B			
Administrative Leadtime *(in Months)*: 0				Production Leadtime *(in Months)*: 0			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates							
Delivery Dates							

Manufacturer Name: TBD				Manufacturer Location: TBD D			
Administrative Leadtime *(in Months)*: 0				Production Leadtime *(in Months)*: 0			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates							
Delivery Dates							

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 3: SURFACE ECDIS-N FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE INTEGRATED BRIDGE SYSTEM (IBS) HARDWARE/SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	8 / 5.942	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 5.942
FY 2022	- / -	6 / 4.627	2 / 1.573	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 6.200
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	8 / 5.942	6 / 4.627	2 / 1.573	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 12.142

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	8	-	-	-	6	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Out	8	-	-	-	6	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16

Method of Implementation: AIT:: Installation Name: SURFACE SCALABLE ECDIS-N HARDWARE/SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	12 / 1.775	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.775
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 3: SURFACE ECDIS-N FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE SCALABLE ECDIS-N HARDWARE/SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total	12 / 1.775	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.775

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Method of Implementation: AIT:: Installation Name: SURFACE SCALABLE ECDIS-N SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	13 / 1.177	18 / 0.397	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	31 / 1.574
FY 2022	- / -	- / -	10 / 0.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.225
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	13 / 1.177	18 / 0.397	10 / 0.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	41 / 1.799

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	13	18	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41
Out	13	18	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 2 of 3: SURFACE ECDIS-N FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: LCS ECDIS-N HARDWARE/SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	4 / 0.441	4 / 0.450	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.891
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	4 / 0.441	4 / 0.450	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.891

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Method of Implementation (Organic): MCM ECDIS-N HARDWARE/SOFTWARE - Not Installed **Installation Quantity:** 12

Method of Implementation (Organic): MCM ECDIS-N HARDWARE/SOFTWARE INSTALLATION - Not Installed **Installation Quantity:** 12

Method of Implementation (Organic): PC ECDIS-N HARDWARE/SOFTWARE INSTALLATION - Not Installed **Installation Quantity:** 12

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 3: CARRIER ECDIS-N FIELD CHANGES

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Carrier Scalable SW)	Manufacturer Location: CHARLOTTESVILLE, VA
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Carrier Scalable HW/SW)	Manufacturer Location: CHARLOTTESVILLE, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER SCALABLE ECDIS-N HARDWARE/SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	6 / 1.314	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 1.314
FY 2022	- / -	1 / 0.331	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.331
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 1.314	1 / 0.331	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 1.645

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	6	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Out	6	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 2 / GW051: ECDIS-N MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 3: CARRIER ECDIS-N FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER SCALABLE ECDIS-N SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	8 / 0.246	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.246
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	8 / 0.246	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.246

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Footnotes:

(15) AMPHIB ECDIS-N FIELD CHANGES: Year-to-Year fluctuations reflect constantly changing fielding plans based on CNO avail schedule shifts and conjunctive alternations

(16) AMPHIB SCALABLE ECDIS-N SOFTWARE: Quantity reflects number of hulls to be upgraded. Bulk licenses were previously procured, and therefore, there's no procurement cost for ECDIS-N SW. However, the procurement quantity info is needed for ECDIS-N since there's associated installation quantity and cost. AMPHIB ECDIS-N FIELD CHANGES: Year-to-Year fluctuations reflect constantly changing fielding plans based on CNO avail schedule shifts and conjunctive alternations

(17) SURFACE ECDIS-N FIELD CHANGES: Year-to-Year fluctuations reflect constantly changing fielding plans based on CNO avail schedule shifts and conjunctive alternations.

(18) SURFACE SCALABLE ECDIS-N SOFTWARE: Quantity reflects number of hulls to be upgraded. Bulk licenses were previously procured, and therefore, there's no procurement cost for ECDIS-N SW. However, the procurement quantity info is needed for ECDIS-N since there's associated installation quantity and cost. Year-to-Year fluctuations reflect constantly changing fielding plans based on CNO avail schedule shifts and conjunctive alternations.

(19) SURFACE ECDIS-N FIELD CHANGES: Year-to-Year fluctuations reflect constantly changing fielding plans based on CNO avail schedule shifts and conjunctive alternations.

(20) SURFACE ECDIS-N FIELD CHANGES: Year-to-Year fluctuations reflect constantly changing fielding plans based on CNO avail schedule shifts and conjunctive alternations.

(21) SURFACE ECDIS-N FIELD CHANGES: Year-to-Year fluctuations reflect constantly changing fielding plans based on CNO avail schedule shifts and conjunctive alternations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 3 / GW053: AN/WSN-12
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	11.780	21.250	26.700	13.065	0.000	13.065	11.860	28.387	30.471	28.247	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	11.780	21.250	26.700	13.065	0.000	13.065	11.860	28.387	30.471	28.247	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**11.780**	**21.250**	**26.700**	**13.065**	**0.000**	**13.065**	**11.860**	**28.387**	**30.471**	**28.247**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
These funds are for the procurement and installation of AN/WSN-12 Inertial Navigation System - Replacement (INS-R) on surface ships, submarines, and carriers.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 3 / GW053: AN/WSN-12
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW053: AN/WSN-12	**Modification Type:** AN/WSN-12	**Related RDT&E PEs:** 0204228N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: GW053: AN/WSN-12												
B Kits												
Recurring												
1.1.1) SURFACE AN/WSN-12 - NonOrganic (22)	4 / 11.780	8 / 20.000	7 / 17.500	2 / 5.100	- / -	2 / 5.100	3 / 7.803	8 / 21.224	8 / 21.649	7 / 19.322	- / -	47 / 124.378
1.1.2) SUBMARINE AN/WSN-12 - NonOrganic (23)	- / -	1 / 1.250	2 / 5.000	2 / 5.100	- / -	2 / 5.100	1 / 2.601	2 / 5.306	2 / 5.412	2 / 5.520	Continuing	Continuing
Subtotal: Recurring	*- / 11.780*	*- / 21.250*	*- / 22.500*	*- / 10.200*	*- / -*	*- / 10.200*	*- / 10.404*	*- / 26.530*	*- / 27.061*	*- / 24.842*	*Continuing*	*Continuing*
Subtotal: GW053: AN/WSN-12	*4 / 11.780*	*9 / 21.250*	*9 / 22.500*	*4 / 10.200*	*- / -*	*4 / 10.200*	*4 / 10.404*	*10 / 26.530*	*10 / 27.061*	*9 / 24.842*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 11.780*	*- / 21.250*	*- / 22.500*	*- / 10.200*	*- / -*	*- / 10.200*	*- / 10.404*	*- / 26.530*	*- / 27.061*	*- / 24.842*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 1: GW053: AN/WSN-12	- / 0.000	- / 0.000	- / 4.200	- / 2.865	- / 0.000	- / 2.865	- / 1.456	- / 1.857	- / 3.410	- / 3.405	- / 4.098	- / 21.291
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 4.200*	*- / 2.865*	*- / -*	*- / 2.865*	*- / 1.456*	*- / 1.857*	*- / 3.410*	*- / 3.405*	*- / 4.098*	*- / 21.291*
Total												
Total Cost (Procurement + Support + Installation)	**11.780**	**21.250**	**26.700**	**13.065**	**0.000**	**13.065**	**11.860**	**28.387**	**30.471**	**28.247**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 3 / GW053: AN/WSN-12
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: GW053: AN/WSN-12

Manufacturer Information

Manufacturer Name: TBD (Sub WSN-12)	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 17

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	Jan 2028
Delivery Dates	Jun 2023	Jun 2024	Jun 2025	Jun 2026	Jun 2027	Jun 2028	Jun 2029

Manufacturer Name: TBD (Surf WSN-12)	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 17

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	Jan 2028
Delivery Dates	Jun 2023	Jun 2024	Jun 2025	Jun 2026	Jun 2027	Jun 2028	Jun 2029

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE AN/WSN-12

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	4 / 1.428	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.428
FY 2022	- / -	- / -	0 / 2.772	8 / 0.000	0 / 0.000	8 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	8 / 2.772
FY 2023	- / -	- / -	- / -	0 / 2.508	0 / 0.000	0 / 2.508	7 / 0.000	- / -	- / -	- / -	0 / 0.000	7 / 2.508
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.728	2 / 0.000	- / -	- / -	0 / 0.000	2 / 0.728
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.114	3 / 0.000	- / -	0 / 0.000	3 / 1.114
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.031	8 / 0.000	0 / 0.000	8 / 3.031
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.705	8 / 0.000	8 / 2.705
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.670	7 / 2.670
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	4 / 4.200	8 / 2.508	0 / 0.000	8 / 2.508	7 / 0.728	2 / 1.114	3 / 3.031	8 / 2.705	15 / 2.670	47 / 16.956

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	4	-	-	-	8	-	-	-	7	-	-	-	2	-	-	-	3	-	-	-	-	8	-	-	15	47
Out	-	-	-	-	-	4	-	-	-	8	-	-	-	7	-	-	-	2	-	-	-	3	-	-	-	-	8	-	-	15	47

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 3 / GW053: AN/WSN-12
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: GW053: AN/WSN-12

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-12

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	1 / 0.357	0 / 0.000	1 / 0.357	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.357
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.728	- / -	- / -	- / -	0 / 0.000	2 / 0.728
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.743	- / -	- / -	0 / 0.000	2 / 0.743
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.379	- / -	0 / 0.000	1 / 0.379
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.700	0 / 0.000	2 / 0.700
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.700	2 / 0.700
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.728	2 / 0.728
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
Total	- / -	- / -	- / -	1 / 0.357	0 / 0.000	1 / 0.357	2 / 0.728	2 / 0.743	1 / 0.379	2 / 0.700	4 / 1.428	12 / 4.335

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	2	-	-	-	1	-	-	-	2	-	-	-	4	12
Out	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	2	-	-	-	1	-	-	-	2	-	-	-	4	12

Footnotes:

(22) SURFACE AN/WSN-12 PROCUREMENT: Production leadtime of 17 months does not include integration testing to be conducted by the ISEA prior to delivery to ship for installation. Overall leadtime from contract award to delivery to ship for installation is no less than 20 months. Installation funding required FY after procurement to meet installation contract leadtimes. Actual installations to occur two FY following procurement. The unit installation cost is expected to decrease from FY23 to FY24 due to a more mature installation process. Reduced FY 2023 quantities by 1 as a result of a $2.5M reduction.

(23) SUBMARINE AN/WSN-12 PROCUREMENT: Production leadtime of 17 months does not include integration testing to be conducted by the ISEA prior to delivery to ship for installation. Overall leadtime from contract award to delivery to ship for installation is no less than 20 months.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	46.971	3.956	2.584	0.891	0.000	0.891	0.000	0.000	0.000	0.000	0.000	54.402
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	46.971	3.956	2.584	0.891	0.000	0.891	0.000	0.000	0.000	0.000	0.000	54.402
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**46.971**	**3.956**	**2.584**	**0.891**	**0.000**	**0.891**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**54.402**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
These funds are for the procurement and installation of Speed Log upgrades and Tech Refresh on surface ships, submarines, and carriers.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW055: SPEED LOGS	**Modification Type:** SPEED LOGS	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 4: AMPHIB SPEED LOG												
B Kits												
Recurring												
1.1.1) AMPHIB AN/WSN-9 - NonOrganic	25 / 6.685	4 / 0.694	1 / 0.188	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 7.567
1.1.2) AMPHIB SWITCHBOARD - Organic	7 / 0.350	4 / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.550
Subtotal: Recurring	*- / 7.035*	*- / 0.894*	*- / 0.188*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.117*
Subtotal: AMPHIB SPEED LOG	*32 / 7.035*	*8 / 0.894*	*1 / 0.188*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*41 / 8.117*
Modification Item 2 of 4: SURFACE SPEED LOG												
B Kits												
Recurring												
2.1.1) SURFACE AN/WSN-9 - NonOrganic [24]	58 / 10.795	6 / 0.949	2 / 0.394	1 / 0.201	- / -	1 / 0.201	- / -	- / -	- / -	- / -	- / -	67 / 12.339
Subtotal: Recurring	*- / 10.795*	*- / 0.949*	*- / 0.394*	*- / 0.201*	*- / -*	*- / 0.201*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 12.339*
Subtotal: SURFACE SPEED LOG	*58 / 10.795*	*6 / 0.949*	*2 / 0.394*	*1 / 0.201*	*- / -*	*1 / 0.201*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*67 / 12.339*
Modification Item 3 of 4: SUBMARINE SPEED LOG												
B Kits												
Recurring												
3.1.1) SUBMARINE AN/WSN-9 (SSBN) - NonOrganic	14 / 1.200	1 / 0.179	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 1.379
3.1.2) SUBMARINE AN/WSN-9 (SSN) - NonOrganic	21 / 2.938	3 / 0.536	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 3.474
Subtotal: Recurring	*- / 4.138*	*- / 0.715*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4.853*
Subtotal: SUBMARINE SPEED LOG	*35 / 4.138*	*4 / 0.715*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*39 / 4.853*
Modification Item 4 of 4: CARRIER SPEED LOG												
B Kits												
Recurring												
4.1.1) CARRIER AN/WSN-9 - NonOrganic [25]	2 / 0.194	1 / 0.173	1 / 0.188	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.555
4.1.2) CARRIER AN/WSN-8 TECH REFRESH - NonOrganic	4 / 0.776	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.776
Subtotal: Recurring	*- / 0.970*	*- / 0.173*	*- / 0.188*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.331*
Subtotal: CARRIER SPEED LOG	*6 / 0.970*	*1 / 0.173*	*1 / 0.188*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*8 / 1.331*
Subtotal: Procurement, All Modification Items	*- / 22.938*	*- / 2.731*	*- / 0.770*	*- / 0.201*	*- / -*	*- / 0.201*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 26.640*
Installation												

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW055: SPEED LOGS	**Modification Type:** SPEED LOGS	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Modification Item 1 of 4: AMPHIB SPEED LOG	- / 4.743	- / 0.388	- / 0.712	- / 0.363	- / 0.000	- / 0.363	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 6.206
Modification Item 2 of 4: SURFACE SPEED LOG	- / 11.458	- / 0.457	- / 0.726	- / 0.185	- / 0.000	- / 0.185	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 12.826
Modification Item 3 of 4: SUBMARINE SPEED LOG	- / 6.672	- / 0.276	- / 0.376	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 7.324
Modification Item 4 of 4: CARRIER SPEED LOG	- / 1.160	- / 0.104	- / 0.000	- / 0.142	- / 0.000	- / 0.142	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.406
Subtotal: Installation	*- / 24.033*	*- / 1.225*	*- / 1.814*	*- / 0.690*	*- / -*	*- / 0.690*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 27.762*
Total												
Total Cost (Procurement + Support + Installation)	**46.971**	**3.956**	**2.584**	**0.891**	**0.000**	**0.891**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**54.402**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 4: AMPHIB SPEED LOG

Manufacturer Information

Manufacturer Name: WR Systems. (Amphib WSN-9)	Manufacturer Location: Norfolk, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Dec 2022					
Delivery Dates	Aug 2022	Aug 2023					

Manufacturer Name: TBD	Manufacturer Location: TBD E
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB AN/WSN-9

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	25 / 4.743	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	25 / 4.743
FY 2022	- / -	2 / 0.388	2 / 0.712	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.100
FY 2023	- / -	- / -	- / -	1 / 0.363	0 / 0.000	1 / 0.363	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.363
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	25 / 4.743	2 / 0.388	2 / 0.712	1 / 0.363	0 / 0.000	1 / 0.363	- / -	- / -	- / -	- / -	0 / 0.000	30 / 6.206

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	25	-	-	-	2	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
Out	25	-	-	-	2	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30

Exhibit P-3a, Individual Modification: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 4: AMPHIB SPEED LOG		
Installation Information		
Method of Implementation (Organic): AMPHIB SWITCHBOARD	**Installation Quantity:** 11	

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 4: SURFACE SPEED LOG

Manufacturer Information

Manufacturer Name: WR Systems (Surf WSN-9)	Manufacturer Location: Norfolk, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Dec 2022	Dec 2023				
Delivery Dates	Aug 2022	Aug 2023	Aug 2024				

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE AN/WSN-9

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	58 / 11.458	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	58 / 11.458
FY 2022	- / -	4 / 0.457	2 / 0.233	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.690
FY 2023	- / -	- / -	0 / 0.493	2 / 0.000	0 / 0.000	2 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.493
FY 2024	- / -	- / -	- / -	0 / 0.185	0 / 0.000	0 / 0.185	1 / 0.000	- / -	- / -	- / -	0 / 0.000	1 / 0.185
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	58 / 11.458	4 / 0.457	2 / 0.726	2 / 0.185	0 / 0.000	2 / 0.185	1 / 0.000	- / -	- / -	- / -	0 / 0.000	67 / 12.826

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	58	-	-	-	4	-	2	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67
Out	58	-	-	-	4	-	2	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE SPEED LOG

Manufacturer Information

Manufacturer Name: WR Systems (Sub WSN-9 SSBN)	Manufacturer Location: Norfolk, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Aug 2022						

Manufacturer Name: WR Systems (Sub WSN-9 SSN)	Manufacturer Location: Norfolk, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Aug 2022						

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-9 (SSBN)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	13 / 3.089	1 / 0.092	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 3.181
FY 2022	- / -	- / -	1 / 0.094	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.094
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	13 / 3.089	1 / 0.092	1 / 0.094	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 3.275

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	13	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Out	13	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE SPEED LOG

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-9 (SSN)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	19 / 3.583	2 / 0.184	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	21 / 3.767
FY 2022	- / -	- / -	3 / 0.282	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.282
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	19 / 3.583	2 / 0.184	3 / 0.282	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 4.049

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	19	2	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
Out	19	2	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 4 of 4: CARRIER SPEED LOG

Manufacturer Information

Manufacturer Name: WR Systems (Carrier WSN-8 Tech Ref) | Manufacturer Location: Norfolk, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Manufacturer Name: WR Systems (Carrier WSN-9) | Manufacturer Location: Norfolk, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Dec 2022					
Delivery Dates	Aug 2022	Aug 2023					

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER AN/WSN-9

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 0.380	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.380
FY 2022	- / -	1 / 0.104	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.104
FY 2023	- / -	- / -	- / -	1 / 0.142	0 / 0.000	1 / 0.142	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.142
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 0.380	1 / 0.104	- / -	1 / 0.142	0 / 0.000	1 / 0.142	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.626

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Out	2	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 4 / GW055: SPEED LOGS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 4 of 4: CARRIER SPEED LOG

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER AN/WSN-8 TECH REFRESH

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 0.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.780
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 0.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.780

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Out	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4

Footnotes:

(24) SURFACE AN/WSN-9: Starting in FY 2023, installation funding required same FY as procurement to meet installation contract leadtimes. Actual installations to occur FY following procurement.

(25) CARRIER AN/WSN-9: Installation timeframes based on planned ship availabilities IAW approved fielding plan.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	63.171	6.250	10.227	19.861	0.000	19.861	22.849	10.649	10.089	11.172	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	63.171	6.250	10.227	19.861	0.000	19.861	22.849	10.649	10.089	11.172	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**63.171**	**6.250**	**10.227**	**19.861**	**0.000**	**19.861**	**22.849**	**10.649**	**10.089**	**11.172**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for the software build, procurement, and installation of Navy ECDIS hardware and software to replace legacy ECDIS-N capability on surface ships and carriers.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW056: NAVY ECDIS	**Modification Type:** NAVY ECDIS	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 2: NAVY ECDIS NON-RECURRING												
B Kits												
Non-Recurring												
1.1.1) NAVY ECDIS ACQUISITION DOCUMENTATION - Organic	- / 5.880	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.880
1.1.2) NAVY ECDIS HARDWARE - Organic (26)	- / -	- / -	- / 4.369	- / 15.787	- / -	- / 15.787	- / 12.301	- / 0.366	- / 0.876	- / 0.360	- / -	- / 34.059
Subtotal: Non-Recurring	*- / 5.880*	*- / -*	*- / 4.369*	*- / 15.787*	*- / -*	*- / 15.787*	*- / 12.301*	*- / 0.366*	*- / 0.876*	*- / 0.360*	*- / 0.000*	*- / 39.939*
Subtotal: NAVY ECDIS NON-RECURRING	*- / 5.880*	*- / -*	*- / 4.369*	*- / 15.787*	*- / -*	*- / 15.787*	*- / 12.301*	*- / 0.366*	*- / 0.876*	*- / 0.360*	*- / -*	*- / 39.939*
Modification Item 2 of 2: NAVY ECDIS PROCUREMENT												
B Kits												
Recurring												
2.1.1) NAVY ECDIS SOFTWARE PRODUCTION - Organic (27)	- / 30.729	- / 4.000	- / 3.700	- / 1.945	- / -	- / 1.945	- / 2.182	- / 0.357	- / 0.360	- / 0.302	Continuing	Continuing
2.1.2) AMPHIB NAVY ECDIS HARDWARE - NonOrganic (28)	4 / 4.236	- / -	2 / 0.488	2 / 0.497	- / -	2 / 0.497	5 / 1.268	1 / 0.259	4 / 1.056	- / -	2 / 0.497	20 / 8.301
2.1.3) AMPHIB NAVY ECDIS SOFTWARE - NonOrganic (29)	- / -	2 / 0.000	10 / 0.000	4 / 0.000	- / -	4 / 0.000	7 / 0.000	5 / 0.000	1 / 0.000	3 / 0.000	2 / 0.000	34 / 0.000
2.1.4) SURFACE NAVY ECDIS HARDWARE - NonOrganic (30)	13 / 13.557	- / -	- / -	- / -	- / -	- / -	10 / 2.537	19 / 4.916	12 / 3.167	19 / 5.115	Continuing	Continuing
2.1.5) SURFACE NAVY ECDIS SOFTWARE - NonOrganic (31)	- / -	8 / 0.000	24 / 0.000	15 / 0.000	- / -	15 / 0.000	24 / 0.000	21 / 0.000	23 / 0.000	22 / 0.000	41 / 0.000	178 / 0.000
2.1.6) CARRIER NAVY ECDIS HARDWARE - NonOrganic (32)	- / -	- / -	- / -	1 / 0.363	- / -	1 / 0.363	1 / 0.371	- / -	1 / 0.386	1 / 0.393	Continuing	Continuing
2.1.7) CARRIER NAVY ECDIS SOFTWARE - NonOrganic (33)	- / -	2 / 0.000	3 / 0.000	2 / 0.000	- / -	2 / 0.000	4 / 0.000	3 / 0.000	- / -	1 / 0.000	- / -	15 / 0.000
Subtotal: Recurring	*- / 48.522*	*- / 4.000*	*- / 4.188*	*- / 2.805*	*- / -*	*- / 2.805*	*- / 6.358*	*- / 5.532*	*- / 4.969*	*- / 5.810*	*Continuing*	*Continuing*
Subtotal: NAVY ECDIS PROCUREMENT	*17 / 48.522*	*12 / 4.000*	*39 / 4.188*	*24 / 2.805*	*- / -*	*24 / 2.805*	*51 / 6.358*	*49 / 5.532*	*41 / 4.969*	*46 / 5.810*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 54.402*	*- / 4.000*	*- / 8.557*	*- / 18.592*	*- / -*	*- / 18.592*	*- / 18.659*	*- / 5.898*	*- / 5.845*	*- / 6.170*	*Continuing*	*Continuing*
Installation												
Modification Item 2 of 2: NAVY ECDIS PROCUREMENT	- / 8.769	- / 2.250	- / 1.670	- / 1.269	- / 0.000	- / 1.269	- / 4.190	- / 4.751	- / 4.244	- / 5.002	- / 1.700	- / 33.845
Subtotal: Installation	*- / 8.769*	*- / 2.250*	*- / 1.670*	*- / 1.269*	*- / -*	*- / 1.269*	*- / 4.190*	*- / 4.751*	*- / 4.244*	*- / 5.002*	*- / 1.700*	*- / 33.845*

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW056: NAVY ECDIS	**Modification Type:** NAVY ECDIS	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total												
Total Cost (Procurement + Support + Installation)	63.171	6.250	10.227	19.861	0.000	19.861	22.849	10.649	10.089	11.172	Continuing	Continuing

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 2: NAVY ECDIS NON-RECURRING		

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 2: NAVY ECDIS PROCUREMENT

Manufacturer Information

Manufacturer Name: TBD (AMPHIB NAVY ECDIS HW)				Manufacturer Location: TBD			
Administrative Leadtime *(in Months)*: 4				Production Leadtime *(in Months)*: 12			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates		Feb 2023	Feb 2024	Feb 2025	Feb 2026	Feb 2027	Feb 2028
Delivery Dates		Feb 2024	Feb 2025	Feb 2026	Feb 2027	Feb 2028	Feb 2029
Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Amphib Navy ECDIS SW)@CHARLOTTESVILLE, VA				Manufacturer Location: Charlottesville, VA			
Administrative Leadtime *(in Months)*: 10				Production Leadtime *(in Months)*: 0			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates	Aug 2022	Aug 2023	Aug 2024	Aug 2025	Aug 2026	Aug 2027	Aug 2028
Delivery Dates	Aug 2022	Aug 2023	Aug 2024	Aug 2025	Aug 2026	Aug 2027	Aug 2028
Manufacturer Name: Northrop Grumman Systems Corp. (Carrier Navy ECDIS SW)				Manufacturer Location: Charlottesville, VA			
Administrative Leadtime *(in Months)*: 10				Production Leadtime *(in Months)*: 0			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates	Aug 2022	Aug 2023	Aug 2024	Aug 2025	Aug 2026		Aug 2028
Delivery Dates	Aug 2022	Aug 2023	Aug 2024	Aug 2025	Aug 2026		Aug 2028
Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Surface Navy ECDIS SW)				Manufacturer Location: Charlottesville, VA			
Administrative Leadtime *(in Months)*: 10				Production Leadtime *(in Months)*: 0			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates	Aug 2022	Aug 2023	Aug 2024	Aug 2025	Aug 2026	Aug 2027	Aug 2028
Delivery Dates	Aug 2022	Aug 2023	Aug 2024	Aug 2025	Aug 2026	Aug 2027	Aug 2028
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime *(in Months)*: 4				Production Leadtime *(in Months)*: 12			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates			Feb 2024			Feb 2027	Feb 2028
Delivery Dates			Feb 2025			Feb 2028	Feb 2029
Manufacturer Name: TBD (Surf Navy ECDIS HW)				Manufacturer Location: TBD			
Administrative Leadtime *(in Months)*: 4				Production Leadtime *(in Months)*: 8			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates			Feb 2024	Feb 2025	Feb 2026	Feb 2027	Feb 2028

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 2: NAVY ECDIS PROCUREMENT

Manufacturer Information

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Delivery Dates			Oct 2024	Oct 2025	Oct 2026	Oct 2027	Oct 2028

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB NAVY ECDIS HARDWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 2.086	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2.086
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.371	2 / 0.000	0 / 0.000	2 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.371
FY 2024	- / -	- / -	- / -	0 / 0.378	0 / 0.000	0 / 0.378	2 / 0.000	- / -	- / -	- / -	0 / 0.000	2 / 0.378
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.965	5 / 0.000	- / -	- / -	0 / 0.000	5 / 0.965
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.197	1 / 0.000	- / -	0 / 0.000	1 / 0.197
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.803	4 / 0.000	0 / 0.000	4 / 0.803
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.418	2 / 0.418
Total	4 / 2.086	- / -	0 / 0.371	2 / 0.378	0 / 0.000	2 / 0.378	2 / 0.965	5 / 0.197	1 / 0.803	4 / 0.000	2 / 0.418	20 / 5.218

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	4	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	-	5	-	-	-	1	-	-	-	4	-	2	20
Out	4	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	-	5	-	-	-	1	-	-	-	4	-	2	20

Method of Implementation: AIT:: Installation Name: AMPHIB NAVY ECDIS SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	2 / 0.053	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.053
FY 2023	- / -	- / -	10 / 0.265	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.265
FY 2024	- / -	- / -	- / -	4 / 0.108	0 / 0.000	4 / 0.108	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.108
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.193	- / -	- / -	- / -	0 / 0.000	7 / 0.193

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 2: NAVY ECDIS PROCUREMENT

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB NAVY ECDIS SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.140	- / -	- / -	0 / 0.000	5 / 0.140
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.029	- / -	0 / 0.000	1 / 0.029
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.088	0 / 0.000	3 / 0.088
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.060	2 / 0.060
Total	- / -	- / -	12 / 0.318	4 / 0.108	0 / 0.000	4 / 0.108	7 / 0.193	5 / 0.140	1 / 0.029	3 / 0.088	2 / 0.060	34 / 0.936

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	2	-	-	10	-	-	-	4	-	-	-	7	-	-	-	5	-	-	-	1	-	-	-	3	2	34
Out	-	-	-	-	-	2	-	-	10	-	-	-	4	-	-	-	7	-	-	-	5	-	-	-	1	-	-	-	3	2	34

Method of Implementation: AIT:: Installation Name: SURFACE NAVY ECDIS HARDWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	13 / 6.683	3 / 2.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 8.933
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.930	10 / 0.000	- / -	- / -	0 / 0.000	10 / 1.930
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.740	19 / 0.000	- / -	0 / 0.000	19 / 3.740
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.409	12 / 0.000	0 / 0.000	12 / 2.409
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.891	19 / 0.000	19 / 3.891
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
Total	13 / 6.683	3 / 2.250	- / -	- / -	- / -	- / -	0 / 1.930	10 / 3.740	19 / 2.409	12 / 3.891	19 / 0.000	76 / 20.903

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 2: NAVY ECDIS PROCUREMENT

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE NAVY ECDIS HARDWARE

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	19	-	-	-	12	-	-	-	19	73
Out	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	19	-	-	-	12	-	-	-	19	73

Method of Implementation: AIT:: Installation Name: SURFACE NAVY ECDIS SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	8 / 0.212	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.212
FY 2023	- / -	- / -	24 / 0.636	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 0.636
FY 2024	- / -	- / -	- / -	15 / 0.405	0 / 0.000	15 / 0.405	- / -	- / -	- / -	- / -	0 / 0.000	15 / 0.405
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.661	- / -	- / -	- / -	0 / 0.000	24 / 0.661
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 0.590	- / -	- / -	0 / 0.000	21 / 0.590
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.659	- / -	0 / 0.000	23 / 0.659
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 0.643	0 / 0.000	22 / 0.643
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 1.222	41 / 1.222
Total	- / -	- / -	32 / 0.848	15 / 0.405	0 / 0.000	15 / 0.405	24 / 0.661	21 / 0.590	23 / 0.659	22 / 0.643	41 / 1.222	178 / 5.028

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	8	-	-	24	-	-	-	15	-	-	-	24	-	-	-	21	-	-	-	23	-	-	-	22	41	178
Out	-	-	-	-	-	8	-	-	24	-	-	-	15	-	-	-	24	-	-	-	21	-	-	-	23	-	-	-	22	41	178

Method of Implementation: AIT:: Installation Name: CARRIER NAVY ECDIS HARDWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 2: NAVY ECDIS PROCUREMENT

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER NAVY ECDIS HARDWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	0 / 0.324	0 / 0.000	0 / 0.324	1 / 0.000	- / -	- / -	- / -	0 / 0.000	1 / 0.324
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.331	1 / 0.000	- / -	- / -	0 / 0.000	1 / 0.331
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.344	1 / 0.000	0 / 0.000	1 / 0.344
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.351	1 / 0.000	1 / 0.351
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
Total	- / -	- / -	- / -	0 / 0.324	0 / 0.000	0 / 0.324	1 / 0.331	1 / 0.000	0 / 0.344	1 / 0.351	1 / 0.000	4 / 1.350

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	4
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	4

Method of Implementation: TBD:: Installation Name: CARRIER NAVY ECDIS SOFTWARE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	2 / 0.053	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.053
FY 2023	- / -	- / -	3 / 0.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.080
FY 2024	- / -	- / -	- / -	2 / 0.054	0 / 0.000	2 / 0.054	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.054
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.110	- / -	- / -	- / -	0 / 0.000	4 / 0.110
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.084	- / -	- / -	0 / 0.000	3 / 0.084
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.029	0 / 0.000	1 / 0.029
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	5 / 0.133	2 / 0.054	0 / 0.000	2 / 0.054	4 / 0.110	3 / 0.084	- / -	1 / 0.029	0 / 0.000	15 / 0.410

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 5 / GW056: NAVY ECDIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 2: NAVY ECDIS PROCUREMENT

Installation Information

Method of Implementation: TBD:: Installation Name: CARRIER NAVY ECDIS SOFTWARE

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	2	-	-	3	-	-	-	2	-	-	-	4	-	-	-	3	-	-	-	-	-	-	-	1	-	15
Out	-	-	-	-	-	2	-	-	3	-	-	-	2	-	-	-	4	-	-	-	3	-	-	-	-	-	-	-	1	-	15

Method of Implementation (Organic): NAVY ECDIS SOFTWARE PRODUCTION - Not Installed

Installation Quantity: 0

Footnotes:

(26) NAVY ECDIS HARDWARE: Navy ECDIS Hardware funds are required for the procurement of Scalable Integrated Bridge System (SIBS) hardware to support Navy ECDIS software at land-based facilities and onboard Surface Ships. The SIBS hardware includes Emergency Laptop (ENL), hardware racks, and displays that meet cybersecurity requirements and are required to operate Navy ECDIS. The plan is to procure SIBS hardware suites using the Computing infrastructure (CI) hardware. The CI initiative is a PEO IWS-wide effort to reduce hardware variability and overall lifecycle costs.

(27) NAVY ECDIS SOFTWARE PRODUCTION: Funding is for initial Navy ECDIS software production build and follow-on Navy ECDIS software builds on a two-year cycle.

(28) AMPHIB NAVY ECDIS HARDWARE: Funds provide for the procurement and installation of hardware upgrades to replace legacy ECDIS-N capability on amphibious ships. Installation funding required same FY as procurement to meet installation contract lead-times. Actual installations to occur FY following procurement. Changes due to Navy ECDIS fielding plan update.

(29) AMPHIB NAVY ECDIS SOFTWARE: Quantity reflects number of hulls to be upgraded. Planned bulk license procurement as part of Navy ECDIS Software Production (CE 2.1.1). Navy ECDIS software has no production lead-time.

(30) SURFACE NAVY ECDIS HARDWARE: Funds provide for the procurement and installation of hardware upgrades to replace legacy ECDIS-N capability on surface ships. Installation funding required same FY as procurement to meet installation contract leadtimes. Actual installations to occur FY following procurement.

(31) SURFACE NAVY ECDIS SOFTWARE: Quantity reflects number of hulls to be upgraded. Planned bulk license procurement as part of Navy ECDIS Software Production (CE 2.1.1). Navy ECDIS software has no production leadtime.

(32) CARRIER NAVY ECDIS HARDWARE: Funds provide for the procurement and installation of hardware upgrades to replace legacy ECDIS-N capability on carriers. Installation funding required same FY as procurement to meet installation contract leadtimes. Actual installations to occur FY following procurement.

(33) CARRIER NAVY ECDIS SOFTWARE: Quantity reflects number of hulls to be upgraded. Planned bulk license procurement as part of Navy ECDIS Software Production (CE 2.1.1). Navy ECDIS software has no production leadtime. Decrease in total quantity from PB23 are due to the latest CVN Navy ECDIS SW fielding plan.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 6 / GW061: MK 27 REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	8.878	0.219	0.160	0.326	0.000	0.326	0.332	0.169	0.000	0.000	0.000	10.084
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	8.878	0.219	0.160	0.326	0.000	0.326	0.332	0.169	0.000	0.000	0.000	10.084
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**8.878**	**0.219**	**0.160**	**0.326**	**0.000**	**0.326**	**0.332**	**0.169**	**0.000**	**0.000**	**0.000**	**10.084**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for the procurement and installation of AN/WSN-11 replacement for legacy MK27 Backup Heading Reference systems on surface ships and submarines.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 6 / GW061: MK 27 REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW061: MK 27 REPLACEMENT	**Modification Type:** MK 27 REPLACEMENT	**Related RDT&E PEs:** 0204228N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: GW061: MK 27 REPLACEMENT												
B Kits												
Recurring												
1.1.1) AMPHIB AN/WSN-11 - NonOrganic (34)	13 / 1.619	- / -	1 / 0.160	1 / 0.163	- / -	1 / 0.163	1 / 0.166	- / -	- / -	- / -	- / -	16 / 2.108
1.1.2) SURFACE AN/WSN-11 - NonOrganic	17 / 2.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 2.025
1.1.3) SUBMARINE AN/WSN-11 - NonOrganic	14 / 1.500	1 / 0.133	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 1.633
Subtotal: Recurring	*- / 5.144*	*- / 0.133*	*- / 0.160*	*- / 0.163*	*- / -*	*- / 0.163*	*- / 0.166*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.766*
Subtotal: GW061: MK 27 REPLACEMENT	*44 / 5.144*	*1 / 0.133*	*1 / 0.160*	*1 / 0.163*	*- / -*	*1 / 0.163*	*1 / 0.166*	*- / -*	*- / -*	*- / -*	*- / -*	*48 / 5.766*
Subtotal: Procurement, All Modification Items	*- / 5.144*	*- / 0.133*	*- / 0.160*	*- / 0.163*	*- / -*	*- / 0.163*	*- / 0.166*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.766*
Installation												
Modification Item 1 of 1: GW061: MK 27 REPLACEMENT	- / 3.734	- / 0.086	- / 0.000	- / 0.163	- / 0.000	- / 0.163	- / 0.166	- / 0.169	- / 0.000	- / 0.000	- / 0.000	- / 4.318
Subtotal: Installation	*- / 3.734*	*- / 0.086*	*- / -*	*- / 0.163*	*- / -*	*- / 0.163*	*- / 0.166*	*- / 0.169*	*- / -*	*- / -*	*- / 0.000*	*- / 4.318*
Total												
Total Cost (Procurement + Support + Installation)	**8.878**	**0.219**	**0.160**	**0.326**	**0.000**	**0.326**	**0.332**	**0.169**	**0.000**	**0.000**	**0.000**	**10.084**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 6 / GW061: MK 27 REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: GW061: MK 27 REPLACEMENT

Manufacturer Information

Manufacturer Name: WR Systems (Amphib WSN-11)	Manufacturer Location: Norfolk, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 9

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Jan 2023	Jan 2024	Jan 2025			
Delivery Dates		Oct 2023	Oct 2024	Oct 2025			

Manufacturer Name: WR Systems (Sub WSN-11)	Manufacturer Location: Norfolk, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Manufacturer Name: WR Systems (Surf WSN-11)	Manufacturer Location: Norfolk, VA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 9

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB AN/WSN-11

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	13 / 1.055	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	13 / 1.055
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	1 / 0.163	0 / 0.000	1 / 0.163	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.163
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.166	- / -	- / -	- / -	0 / 0.000	1 / 0.166
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.169	- / -	- / -	0 / 0.000	1 / 0.169
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	13 / 1.055	- / -	- / -	1 / 0.163	0 / 0.000	1 / 0.163	1 / 0.166	1 / 0.169	- / -	- / -	0 / 0.000	16 / 1.553

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 6 / GW061: MK 27 REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: GW061: MK 27 REPLACEMENT

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB AN/WSN-11

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	13	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	16
Out	13	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	16

Method of Implementation: AIT:: Installation Name: SURFACE AN/WSN-11

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	17 / 1.379	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 1.379
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	17 / 1.379	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 1.379

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-11

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	13 / 1.300	1 / 0.043	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 1.343

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 6 / GW061: MK 27 REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: GW061: MK 27 REPLACEMENT

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-11

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
FY 2022	- / -	1 / 0.043	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.043
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	13 / 1.300	2 / 0.086	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 1.386

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	13	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Out	13	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15

Footnotes:

(34) AMPHIB AN/WSN-11: PLT increased from 6 months to 9 months to accommodate future industrial base leadtimes.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	40.356	12.368	8.944	6.895	0.000	6.895	6.780	6.068	6.076	5.495	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	40.356	12.368	8.944	6.895	0.000	6.895	6.780	6.068	6.076	5.495	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**40.356**	**12.368**	**8.944**	**6.895**	**0.000**	**6.895**	**6.780**	**6.068**	**6.076**	**5.495**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for the procurement and installation of field changes, upgrades, and Tech Refresh of AN/WSN-7 Inertial Navigation System on surface ships, submarines, and carriers.

Field Change 22: Upgrades include AN/WSN-7 NAV processor firmware Rev-AG and I/O processor firmware Rev-AC
Field Change 24 / Technical Insertion (TI-18): Bathymetric Fix Update
Field Change 26 / Technical Insertion (TI-20): Information Assurance (IA) Updates
Field Change 27: CDU Tech Refresh
Field Change 28 / Technical Insertion (TI-22): GPS Enhancements
Field Change 30: Surface - Removes excess NTDS-A CCAs from Surface Cabinets for use in new production units. Submarine - Removes excess NTDS-B CCAs from Submarine Cabinets for use in new production units.
Submarine ECI: TI / APB updates
Submarine FC TBD (TI-24 A/F): TBD

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW062: AN/WSN-7 MODERNIZATION	**Modification Type:** AN/WSN-7 MODERNIZATION	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 4: AMPHIB FIELD CHANGES												
B Kits												
Recurring												
1.1.1) AMPHIB AN/WSN-7 FIELD CHANGE 22 - NonOrganic	17 / 0.204	3 / 0.045	1 / 0.015	1 / 0.016	- / -	1 / 0.016	- / -	- / -	- / -	- / -	- / -	22 / 0.280
1.1.2) AMPHIB AN/WSN-7 FIELD CHANGE 27 - NonOrganic	16 / 2.240	8 / 0.948	3 / 0.355	3 / 0.362	- / -	3 / 0.362	- / -	- / -	- / -	- / -	- / -	30 / 3.905
1.1.3) AMPHIB AN/WSN-7 FIELD CHANGE 30 - NonOrganic [35]	- / -	- / -	6 / 0.000	3 / 0.000	- / -	3 / 0.000	3 / 0.000	- / -	- / -	- / -	- / -	12 / 0.000
Subtotal: Recurring	*- / 2.444*	*- / 0.993*	*- / 0.370*	*- / 0.378*	*- / -*	*- / 0.378*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4.185*
Subtotal: AMPHIB FIELD CHANGES	*33 / 2.444*	*11 / 0.993*	*10 / 0.370*	*7 / 0.378*	*- / -*	*7 / 0.378*	*3 / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*64 / 4.185*
Modification Item 2 of 4: SURFACE FIELD CHANGES												
B Kits												
Recurring												
2.1.1) SURFACE AN/WSN-7 FIELD CHANGE 30 - NonOrganic [36]	- / -	- / -	20 / 0.000	19 / 0.000	- / -	19 / 0.000	9 / 0.000	3 / 0.000	3 / 0.000	3 / 0.000	- / -	57 / 0.000
2.1.2) SURFACE AN/WSN-7 FIELD CHANGE 22 - NonOrganic	58 / 0.696	4 / 0.057	5 / 0.078	2 / 0.032	- / -	2 / 0.032	- / -	- / -	- / -	- / -	- / -	69 / 0.863
2.1.3) SURFACE AN/WSN-7 CDU TECH REFRESH EQT - Organic	- / 0.475	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.475
2.1.4) SURFACE AN/WSN-7 FIELD CHANGE 27 - NonOrganic	73 / 10.243	16 / 1.877	5 / 0.592	1 / 0.121	- / -	1 / 0.121	- / -	- / -	- / -	- / -	- / -	95 / 12.833
Subtotal: Recurring	*- / 11.414*	*- / 1.934*	*- / 0.670*	*- / 0.153*	*- / -*	*- / 0.153*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 14.171*
Subtotal: SURFACE FIELD CHANGES	*131 / 11.414*	*20 / 1.934*	*30 / 0.670*	*22 / 0.153*	*- / -*	*22 / 0.153*	*9 / 0.000*	*3 / 0.000*	*3 / 0.000*	*3 / 0.000*	*- / -*	*221 / 14.171*
Modification Item 3 of 4: SUBMARINE FIELD CHANGES												
B Kits												
Recurring												
3.1.1) SUBMARINE SHIPALT 4507 - Organic	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
3.1.2) SUBMARINE ECI 14-006-VA - Organic	4 / 0.020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.020
3.1.3) SUBMARINE ECI (TI-10/12/14) - Organic	44 / 1.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 1.100

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW062: AN/WSN-7 MODERNIZATION	**Modification Type:** AN/WSN-7 MODERNIZATION	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.1.4) SUBMARINE AN/WSN-7A FIELD CHANGE 21 - NonOrganic	6 / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.360
3.1.5) SUBMARINE AN/WSN-7A FIELD CHANGE 22 - NonOrganic	7 / 0.420	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.420
3.1.6) SUBMARINE AN/WSN-7A FIELD CHANGE 23 - NonOrganic	12 / 1.548	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.548
3.1.7) SUBMARINE AN/WSN-7A FIELD CHANGE 24 (TI-18) - NonOrganic	21 / 3.759	3 / 0.918	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 4.677
3.1.8) SUBMARINE AN/WSN-7A FIELD CHANGE 26 (TI-20) - NonOrganic	16 / 2.976	7 / 1.999	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 4.975
3.1.9) SUBMARINE AN/WSN-7A FIELD CHANGE 28 (TI-22) - NonOrganic	- / -	11 / 3.150	5 / 1.775	3 / 1.086	- / -	3 / 1.086	1 / 0.369	- / -	- / -	- / -	- / -	20 / 6.380
3.1.10) SUBMARINE AN/WSN-7 ECI (TI-16/APB-15) - NonOrganic	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000
3.1.11) SUBMARINE AN/WSN-7 ECI (TI-16/APB-17) - Organic	12 / 0.420	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.420
3.1.12) SUBMARINE AN/WSN-7 ECI (TI-18/APB-19) - Organic	10 / 0.350	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.350
3.1.13) SUBMARINE AN/WSN-7 ECI (TI-20/APB-21) - NonOrganic	- / -	5 / 0.102	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.102
3.1.14) SUBMARINE AN/WSN-7A ECI (TI/APB updates) - NonOrganic	- / -	- / -	21 / 0.735	20 / 0.714	- / -	20 / 0.714	18 / 0.655	20 / 0.743	18 / 0.682	18 / 0.696	Continuing	Continuing
3.1.16) SUBMARINE AN/WSN-7A FC TBD (TI-24) - NonOrganic	- / -	- / -	3 / 1.125	5 / 1.913	- / -	5 / 1.913	8 / 3.121	5 / 1.990	- / -	- / -	- / -	21 / 8.149
3.1.17) SUBMARINE AN/WSN-7A FC TBD (TI-26) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.416	2 / 0.849	8 / 3.464	6 / 2.650	Continuing	Continuing
Subtotal: Recurring	*- / 10.953*	*- / 6.169*	*- / 3.635*	*- / 3.713*	*- / -*	*- / 3.713*	*- / 4.561*	*- / 3.582*	*- / 4.146*	*- / 3.346*	*Continuing*	*Continuing*
Subtotal: SUBMARINE FIELD CHANGES	*135 / 10.953*	*26 / 6.169*	*29 / 3.635*	*28 / 3.713*	*- / -*	*28 / 3.713*	*28 / 4.561*	*27 / 3.582*	*26 / 4.146*	*24 / 3.346*	*Continuing*	*Continuing*
Modification Item 4 of 4: CARRIER FIELD CHANGES												
B Kits												
Recurring												
4.1.1) CARRIER AN/WSN-7 FIELD CHANGE 22 - NonOrganic	11 / 0.132	1 / 0.016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.148
4.1.2) CARRIER AN/WSN-7 FIELD CHANGE 27 - NonOrganic	7 / 0.420	1 / 0.143	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.563
Subtotal: Recurring	*- / 0.552*	*- / 0.159*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.711*

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW062: AN/WSN-7 MODERNIZATION	**Modification Type:** AN/WSN-7 MODERNIZATION	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: CARRIER FIELD CHANGES	*18 / 0.552*	*2 / 0.159*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*20 / 0.711*
Subtotal: Procurement, All Modification Items	*- / 25.363*	*- / 9.255*	*- / 4.675*	*- / 4.244*	*- / -*	*- / 4.244*	*- / 4.561*	*- / 3.582*	*- / 4.146*	*- / 3.346*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 4: AMPHIB FIELD CHANGES	- / 2.025	- / 0.733	- / 0.166	- / 0.194	- / 0.000	- / 0.194	- / 0.129	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.247
Modification Item 2 of 4: SURFACE FIELD CHANGES	- / 8.300	- / 0.822	- / 1.036	- / 0.413	- / 0.000	- / 0.413	- / 0.078	- / 0.013	- / 0.013	- / 0.013	- / 0.000	- / 10.688
Modification Item 3 of 4: SUBMARINE FIELD CHANGES	- / 3.493	- / 1.428	- / 3.067	- / 2.044	- / 0.000	- / 2.044	- / 2.012	- / 2.473	- / 1.917	- / 2.136	- / 1.102	- / 19.672
Modification Item 4 of 4: CARRIER FIELD CHANGES	- / 1.175	- / 0.130	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.305
Subtotal: Installation	*- / 14.993*	*- / 3.113*	*- / 4.269*	*- / 2.651*	*- / -*	*- / 2.651*	*- / 2.219*	*- / 2.486*	*- / 1.930*	*- / 2.149*	*- / 1.102*	*- / 34.912*
Total												
Total Cost (Procurement + Support + Installation)	**40.356**	**12.368**	**8.944**	**6.895**	**0.000**	**6.895**	**6.780**	**6.068**	**6.076**	**5.495**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 4: AMPHIB FIELD CHANGES

Manufacturer Information

Manufacturer Name: WR Systems (Amphib WSN-7 FIELD CHANGE 27) — Manufacturer Location: Norfolk, VA

Administrative Leadtime *(in Months)*: 3 — Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Mar 2023	Mar 2024				
Delivery Dates	Sep 2022	Sep 2023	Sep 2024				

Manufacturer Name: N/A (Amphib WSN-7 FC30) — Manufacturer Location: N/A

Administrative Leadtime *(in Months)*: 3 — Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Jan 2023	Jan 2024	Jan 2025			
Delivery Dates		Jan 2023	Jan 2024	Jan 2025			

Manufacturer Name: WR SYSTEMS (Amphib WSN-7 FC22) — Manufacturer Location: Norfolk, VA

Administrative Leadtime *(in Months)*: 3 — Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Dec 2022	Dec 2023				
Delivery Dates	Jun 2022	Jun 2023	Jun 2024				

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB AN/WSN-7 FIELD CHANGE 22

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	17 / 1.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 1.275
FY 2022	- / -	3 / 0.496	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.496
FY 2023	- / -	- / -	1 / 0.067	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.067
FY 2024	- / -	- / -	- / -	1 / 0.068	0 / 0.000	1 / 0.068	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.068
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	17 / 1.275	3 / 0.496	1 / 0.067	1 / 0.068	0 / 0.000	1 / 0.068	- / -	- / -	- / -	- / -	0 / 0.000	22 / 1.906

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 4: AMPHIB FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB AN/WSN-7 FIELD CHANGE 22

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	17	-	-	-	3	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
Out	17	-	-	-	3	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22

Method of Implementation: AIT:: Installation Name: AMPHIB AN/WSN-7 FIELD CHANGE 27

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	15 / 0.750	1 / 0.034	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 0.784
FY 2022	- / -	6 / 0.203	2 / 0.074	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.277
FY 2023	- / -	- / -	- / -	3 / 0.113	0 / 0.000	3 / 0.113	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.113
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.116	- / -	- / -	- / -	0 / 0.000	3 / 0.116
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	15 / 0.750	7 / 0.237	2 / 0.074	3 / 0.113	0 / 0.000	3 / 0.113	3 / 0.116	- / -	- / -	- / -	0 / 0.000	30 / 1.290

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	15	1	-	-	6	2	-	-	-	-	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
Out	15	1	-	-	6	2	-	-	-	-	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 4: AMPHIB FIELD CHANGES

Installation Information

Method of Implementation: [none specified]:: Installation Name: AMPHIB AN/WSN-7 FIELD CHANGE 30

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	6 / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.025
FY 2024	- / -	- / -	- / -	3 / 0.013	0 / 0.000	3 / 0.013	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.013
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.013	- / -	- / -	- / -	0 / 0.000	3 / 0.013
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	6 / 0.025	3 / 0.013	0 / 0.000	3 / 0.013	3 / 0.013	- / -	- / -	- / -	0 / 0.000	12 / 0.051

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	6	-	-	-	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	-	-	-	-	-	-	6	-	-	-	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 2 of 4: SURFACE FIELD CHANGES

Manufacturer Information

Manufacturer Name: WR SYSTEMS (Surf WSN-7 FC22) — Manufacturer Location: NORFOLK. VA

Administrative Leadtime *(in Months)*: 3 — Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Dec 2022	Dec 2023				
Delivery Dates	Jun 2022	Jun 2023	Jun 2024				

Manufacturer Name: N/A (Surface WSN-7 FC30) — Manufacturer Location: N/A

Administrative Leadtime *(in Months)*: 3 — Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	
Delivery Dates		Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	

Manufacturer Name: WR Systems (Surf WSN-7 FC 27) — Manufacturer Location: Norfolk, VA

Administrative Leadtime *(in Months)*: 3 — Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Mar 2023	Mar 2024				
Delivery Dates	Sep 2022	Sep 2023	Sep 2024				

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE AN/WSN-7 FIELD CHANGE 30

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	20 / 0.082	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 0.082
FY 2024	- / -	- / -	- / -	19 / 0.079	0 / 0.000	19 / 0.079	- / -	- / -	- / -	- / -	0 / 0.000	19 / 0.079
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.038	- / -	- / -	- / -	0 / 0.000	9 / 0.038
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.013	- / -	- / -	0 / 0.000	3 / 0.013
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.013	- / -	0 / 0.000	3 / 0.013
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.013	0 / 0.000	3 / 0.013
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	20 / 0.082	19 / 0.079	0 / 0.000	19 / 0.079	9 / 0.038	3 / 0.013	3 / 0.013	3 / 0.013	0 / 0.000	57 / 0.238

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 2 of 4: SURFACE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE AN/WSN-7 FIELD CHANGE 30

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	20	-	-	-	19	-	-	-	9	-	-	-	3	-	-	-	3	-	-	-	3	-	-	-	57
Out	-	-	-	-	-	-	20	-	-	-	19	-	-	-	9	-	-	-	3	-	-	-	3	-	-	-	3	-	-	-	57

Method of Implementation: AIT:: Installation Name: SURFACE AN/WSN-7 FIELD CHANGE 22

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	58 / 4.350	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	58 / 4.350
FY 2022	- / -	4 / 0.279	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.279
FY 2023	- / -	- / -	5 / 0.344	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.344
FY 2024	- / -	- / -	- / -	2 / 0.140	0 / 0.000	2 / 0.140	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.140
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	58 / 4.350	4 / 0.279	5 / 0.344	2 / 0.140	0 / 0.000	2 / 0.140	- / -	- / -	- / -	- / -	0 / 0.000	69 / 5.113

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	58	-	-	-	4	-	-	-	5	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69
Out	58	-	-	-	4	-	-	-	5	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 4: SURFACE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE AN/WSN-7 FIELD CHANGE 27

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	59 / 3.950	14 / 0.543	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	73 / 4.493
FY 2022	- / -	- / -	16 / 0.610	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 0.610
FY 2023	- / -	- / -	- / -	5 / 0.194	0 / 0.000	5 / 0.194	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.194
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.040	- / -	- / -	- / -	0 / 0.000	1 / 0.040
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	59 / 3.950	14 / 0.543	16 / 0.610	5 / 0.194	0 / 0.000	5 / 0.194	1 / 0.040	- / -	- / -	- / -	0 / 0.000	95 / 5.337

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	59	14	-	-	-	16	-	-	-	5	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95
Out	59	14	-	-	-	16	-	-	-	5	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 3 of 4: SUBMARINE FIELD CHANGES		

Manufacturer Information

Manufacturer Name: WR SYSTEMS (Sub WSN-7 ECI)				Manufacturer Location: NORFOLK, VA			
Administrative Leadtime *(in Months)*: 8				Production Leadtime *(in Months)*: 4			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates		Jun 2023	Jun 2024	Jun 2025	Jun 2026	Jun 2027	
Delivery Dates		Oct 2023	Oct 2024	Oct 2025	Oct 2026	Oct 2027	
Manufacturer Name: WR SYSTEMS (Sub WSN-7 FC TBD TI-26)				Manufacturer Location: NORFOLK, VA			
Administrative Leadtime *(in Months)*: 3				Production Leadtime *(in Months)*: 9			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates				Jan 2025	Jan 2026	Jan 2027	
Delivery Dates				Oct 2025	Oct 2026	Oct 2027	
Manufacturer Name: WR SYSTEMS (Sub WSN-7 FC TBD TI-24)				Manufacturer Location: NORFOLK, VA			
Administrative Leadtime *(in Months)*: 3				Production Leadtime *(in Months)*: 9			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates		Jan 2023	Jan 2024	Jan 2025	Jan 2026		
Delivery Dates		Oct 2023	Oct 2024	Oct 2025	Oct 2026		
Manufacturer Name: WR Systems (Sub WSN-7 ECI TI-16/APB-15)				Manufacturer Location: Norfolk, VA			
Administrative Leadtime *(in Months)*: 3				Production Leadtime *(in Months)*: 3			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates							
Delivery Dates							
Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Sub WSN-7 FC24)				Manufacturer Location: CHARLOTTESVILLE, VA			
Administrative Leadtime *(in Months)*: 3				Production Leadtime *(in Months)*: 9			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates	Dec 2021						
Delivery Dates	Sep 2022						
Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Sub WSN-7 FC23)				Manufacturer Location: CHARLOTTESVILLE, VA			
Administrative Leadtime *(in Months)*: 3				Production Leadtime *(in Months)*: 9			
Dates	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Contract Dates							

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 3 of 4: SUBMARINE FIELD CHANGES		

Manufacturer Information

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Delivery Dates							

Manufacturer Name: TBD (Sub WSN-7 ECI TI-20/APB-21) | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Sep 2022						

Manufacturer Name: WR SYSTEMS (Sub WSN-7 FC22) | Manufacturer Location: NORFOLK, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Sub WSN-7 FC26) | Manufacturer Location: CHARLOTTESVILLE, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jan 2022						
Delivery Dates	Oct 2022						

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Sub WSN-7 FC21) | Manufacturer Location: CHARLOTTESVILLE, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Manufacturer Name: WR SYSTEMS (Sub WSN-7 FC28) | Manufacturer Location: NORFOLK, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jan 2022	Jan 2023	Jan 2024	Jan 2025			
Delivery Dates	Oct 2022	Oct 2023	Oct 2024	Oct 2025			

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FIELD CHANGE 21

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	6 / 0.480	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.480
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 0.480	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.480

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Out	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FIELD CHANGE 22

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	7 / 0.053	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 0.053
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FIELD CHANGE 22

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 0.053	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 0.053

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Out	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FIELD CHANGE 23

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	12 / 0.960	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.960
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	12 / 0.960	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.960

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FIELD CHANGE 23

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FIELD CHANGE 24 (TI-18)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	21 / 1.680	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	21 / 1.680
FY 2022	- / -	3 / 0.490	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.490
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	21 / 1.680	3 / 0.490	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 2.170

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	21	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
Out	21	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FIELD CHANGE 26 (TI-20)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 0.320	12 / 0.612	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 0.932
FY 2022	- / -	- / -	7 / 0.364	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 0.364
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 0.320	12 / 0.612	7 / 0.364	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	23 / 1.296

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	12	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Out	4	12	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FIELD CHANGE 28 (TI-22)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	11 / 1.793	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 1.793
FY 2023	- / -	- / -	- / -	5 / 0.831	0 / 0.000	5 / 0.831	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.831
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.509	- / -	- / -	- / -	0 / 0.000	3 / 0.509
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.173	- / -	- / -	0 / 0.000	1 / 0.173
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FIELD CHANGE 28 (TI-22)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	11 / 1.793	5 / 0.831	0 / 0.000	5 / 0.831	3 / 0.509	1 / 0.173	- / -	- / -	0 / 0.000	20 / 3.306

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	11	-	-	-	5	-	-	-	3	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	20
Out	-	-	-	-	-	11	-	-	-	5	-	-	-	3	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	20

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7 ECI (TI-16/APB-15)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	2 / 0.326	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.326
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / 0.326	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.326

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7 ECI (TI-16/APB-15)

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7 ECI (TI-20/APB-21)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	5 / 0.130	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.130
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	5 / 0.130	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.130

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Out	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A ECI (TI/APB updates)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.780	21 / 0.000	0 / 0.000	21 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	21 / 0.780
FY 2024	- / -	- / -	- / -	0 / 0.714	0 / 0.000	0 / 0.714	20 / 0.000	- / -	- / -	- / -	0 / 0.000	20 / 0.714
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.655	18 / 0.000	- / -	- / -	0 / 0.000	18 / 0.655
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.743	20 / 0.000	- / -	0 / 0.000	20 / 0.743
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.682	18 / 0.000	0 / 0.000	18 / 0.682
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.696	18 / 0.000	18 / 0.696
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
Total	- / -	- / -	0 / 0.780	21 / 0.714	0 / 0.000	21 / 0.714	20 / 0.655	18 / 0.743	20 / 0.682	18 / 0.696	18 / 0.000	115 / 4.270

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	21	-	-	-	20	-	-	-	18	-	-	-	20	-	-	-	18	-	-	-	18	115
Out	-	-	-	-	-	-	-	-	-	21	-	-	-	20	-	-	-	18	-	-	-	20	-	-	-	18	-	-	-	18	115

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FC TBD (TI-24)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	3 / 0.499	0 / 0.000	3 / 0.499	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.499
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.848	- / -	- / -	- / -	0 / 0.000	5 / 0.848
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.384	- / -	- / -	0 / 0.000	8 / 1.384
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.882	- / -	0 / 0.000	5 / 0.882
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 4: SUBMARINE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FC TBD (TI-24)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	3 / 0.499	0 / 0.000	3 / 0.499	5 / 0.848	8 / 1.384	5 / 0.882	- / -	0 / 0.000	21 / 3.613

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	3	-	-	-	5	-	-	-	8	-	-	-	5	-	-	-	-	-	-	-	-	21
Out	-	-	-	-	-	-	-	-	-	3	-	-	-	5	-	-	-	8	-	-	-	5	-	-	-	-	-	-	-	-	21

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FC TBD (TI-26)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.173	- / -	- / -	0 / 0.000	1 / 0.173
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.353	- / -	0 / 0.000	2 / 0.353
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.440	0 / 0.000	8 / 1.440
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.102	6 / 1.102
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.173	2 / 0.353	8 / 1.440	6 / 1.102	17 / 3.068

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 3 of 4: SUBMARINE FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE AN/WSN-7A FC TBD (TI-26)

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	8	-	-	-	6	17
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	8	-	-	-	6	17

Method of Implementation (Organic): SUBMARINE SHIPALT 4507 — **Installation Quantity:** 1

Method of Implementation (Organic): SUBMARINE ECI 14-006-VA — **Installation Quantity:** 4

Method of Implementation (Organic): SUBMARINE ECI (TI-10/12/14) — **Installation Quantity:** 44

Method of Implementation (Organic): SUBMARINE AN/WSN-7 ECI (TI-16/APB-17) — **Installation Quantity:** 12

Method of Implementation (Organic): SUBMARINE AN/WSN-7 ECI (TI-18/APB-19) — **Installation Quantity:** 10

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 4 of 4: CARRIER FIELD CHANGES

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Carrier WSN-7 CDU Tech Ref) | Manufacturer Location: CHARLOTTESVILLE, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP. (Carrier WSN-7 FC22) | Manufacturer Location: CHARLOTTESVILLE, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Jun 2022						

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER AN/WSN-7 FIELD CHANGE 22

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	11 / 0.825	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 0.825
FY 2022	- / -	1 / 0.058	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.058
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 0.825	1 / 0.058	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.883

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 7 / GW062: AN/WSN-7 MODERNIZATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 4 of 4: CARRIER FIELD CHANGES

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER AN/WSN-7 FIELD CHANGE 22

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	11	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	11	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Method of Implementation: AIT:: Installation Name: CARRIER AN/WSN-7 FIELD CHANGE 27

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	7 / 0.350	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 0.350
FY 2022	- / -	1 / 0.072	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.072
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 0.350	1 / 0.072	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.422

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	7	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	7	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Footnotes:

(35) AMPHIB AN/WSN-7 FIELD CHANGE 30: Field change removes existing equipment, does not require delivery of any hardware, and has no production leadtime.

(36) SURFACE AN/WSN-7 FIELD CHANGE 30: Field change removes existing equipment, does not require delivery of any hardware, and has no production leadtime.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 8 / GW067: DIGITAL DEPTH DETECTOR
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	4.289	0.145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.434
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	4.289	0.145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.434
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**4.289**	**0.145**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4.434**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This effort has been completed as of FY22 and no further funding is required under OPN LI 0670 budget.
These funds are required for the procurement and installation of Digital Depth Detector to replace legacy depth detectors on submarines.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 8 / GW067: DIGITAL DEPTH DETECTOR
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW067: DIGITAL DEPTH DETECTOR	**Modification Type:** DIGITAL DEPTH DETECTOR	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: GW067: DIGITAL DEPTH DETECTOR												
B Kits												
Recurring												
1.1.1) SUBMARINE DIGITAL DEPTH DETECTOR - NonOrganic (37)	14 / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 1.200
Subtotal: Recurring	*- / 1.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.200*
Subtotal: GW067: DIGITAL DEPTH DETECTOR	*14 / 1.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*14 / 1.200*
Subtotal: Procurement, All Modification Items	*- / 1.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.200*
Installation												
Modification Item 1 of 1: GW067: DIGITAL DEPTH DETECTOR	- / 3.089	- / 0.145	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.234
Subtotal: Installation	*- / 3.089*	*- / 0.145*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.234*
Total												
Total Cost (Procurement + Support + Installation)	**4.289**	**0.145**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4.434**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 8 / GW067: DIGITAL DEPTH DETECTOR

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: GW067: DIGITAL DEPTH DETECTOR

Manufacturer Information

Manufacturer Name: WR Systems (Sub DDD) | Manufacturer Location: Norfolk, VA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: SUBMARINE DIGITAL DEPTH DETECTOR

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	13 / 3.089	1 / 0.145	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 3.234
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	13 / 3.089	1 / 0.145	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 3.234

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Out	13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14

Footnotes:

(37) SUBMARINE DIGITAL DEPTH DETECTOR: Prior year systems procured and funded under P40A Cost Element GW013.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 9 / GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	21.195	0.000	4.039	1.648	0.000	1.648	5.758	7.322	8.141	10.160	13.867	72.130
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	21.195	0.000	4.039	1.648	0.000	1.648	5.758	7.322	8.141	10.160	13.867	72.130
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**21.195**	**0.000**	**4.039**	**1.648**	**0.000**	**1.648**	**5.758**	**7.322**	**8.141**	**10.160**	**13.867**	**72.130**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Cost Element was previously labeled as BOUNDARY DEFENSE CABINET.
These funds are required for the procurement and installation of ANCHOR system on surface ships for cyber protection.

To increase overall Navy cybersecurity efficiency, starting in FY24, the cybersecurity work associated with the Afloat Navigation Cyber Hardening, Observation, and Response (ANCHOR) program will be executed by Situational Awareness Boundary Enforcement and Response (SABER). SABER is the research, design, development, testing, and installation of Cybersecurity solutions for installed integrated computer networks to include shipboard Hull Mechanical and Electrical (HM&E), Navigation Systems, Combat Systems, Fire Control, Sonar, Radar, Communications and other shipboard computerized control systems for all afloat U.S. Navy platforms

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 9 / GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)	**Modification Type:** AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)	**Related RDT&E PEs:** 0204228N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)												
B Kits												
Recurring												
1.1.1) SURFACE ANCHOR SYSTEM - NonOrganic (38)	17 / 10.264	- / -	5 / 4.039	2 / 1.648	- / -	2 / 1.648	3 / 2.521	7 / 6.001	7 / 6.121	6 / 5.352	- / -	47 / 35.946
Subtotal: Recurring	*- / 10.264*	*- / -*	*- / 4.039*	*- / 1.648*	*- / -*	*- / 1.648*	*- / 2.521*	*- / 6.001*	*- / 6.121*	*- / 5.352*	*- / 0.000*	*- / 35.946*
Subtotal: GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)	*17 / 10.264*	*- / -*	*5 / 4.039*	*2 / 1.648*	*- / -*	*2 / 1.648*	*3 / 2.521*	*7 / 6.001*	*7 / 6.121*	*6 / 5.352*	*- / -*	*47 / 35.946*
Subtotal: Procurement, All Modification Items	*- / 10.264*	*- / -*	*- / 4.039*	*- / 1.648*	*- / -*	*- / 1.648*	*- / 2.521*	*- / 6.001*	*- / 6.121*	*- / 5.352*	*- / 0.000*	*- / 35.946*
Installation												
Modification Item 1 of 1: GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)	- / 10.931	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.237	- / 1.321	- / 2.020	- / 4.808	- / 13.867	- / 36.184
Subtotal: Installation	*- / 10.931*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 3.237*	*- / 1.321*	*- / 2.020*	*- / 4.808*	*- / 13.867*	*- / 36.184*
Total												
Total Cost (Procurement + Support + Installation)	**21.195**	**0.000**	**4.039**	**1.648**	**0.000**	**1.648**	**5.758**	**7.322**	**8.141**	**10.160**	**13.867**	**72.130**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 9 / GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)

Manufacturer Information

Manufacturer Name: TBD (ANCHOR System) (39) | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 21

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	
Delivery Dates		Oct 2024	Oct 2025	Oct 2026	Oct 2027	Oct 2028	

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE ANCHOR SYSTEM

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	17 / 10.931	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 10.931
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	5 / 3.237	- / -	- / -	- / -	0 / 0.000	5 / 3.237
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.321	- / -	- / -	0 / 0.000	2 / 1.321
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.020	- / -	0 / 0.000	3 / 2.020
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 4.808	0 / 4.760	7 / 9.568
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 4.857	7 / 4.857
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 4.250	6 / 4.250
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	17 / 10.931	- / -	- / -	- / -	- / -	- / -	5 / 3.237	2 / 1.321	3 / 2.020	7 / 4.808	13 / 13.867	47 / 36.184

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	17	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	2	-	-	-	3	-	-	-	7	-	-	13	47
Out	17	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	2	-	-	-	3	-	-	-	7	-	-	13	47

Footnotes:

(38) Procurement to resume in FY2023.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 9 / GW069: AFLOAT NAVIGATION CYBER HARDENING, OBSERVATION AND RESPONSE (ANCHOR)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(39) Production leadtime applies to FY2023-2026

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 10 / GW070: MILITARY GLOBAL POSITIONING SYSTEM (GPS) USER EQUIPMENT (MGUE)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.208	0.265	0.000	0.265	0.271	0.331	0.000	0.000	0.000	1.075
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.208	0.265	0.000	0.265	0.271	0.331	0.000	0.000	0.000	1.075
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.208**	**0.265**	**0.000**	**0.265**	**0.271**	**0.331**	**0.000**	**0.000**	**0.000**	**1.075**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Cost Element reflects a transition from development(PE 0204228N) to production in FY 2023.
These funds are required for the procurement and installation of Military GPS User Equipment on submarines.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 10 / GW070: MILITARY GLOBAL POSITIONING SYSTEM (GPS) USER EQUIPMENT (MGUE)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW070: MILITARY GPS USER EQUIPMENT	**Modification Type:** MILITARY GPS USER EQUIPMENT	**Related RDT&E PEs:** 0204228N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: GW070: MILITARY GLOBAL POSITIONING SYSTEM (GPS) USER EQUIPMENT (MGUE)												
B Kits												
Recurring												
1.1.1) SUBMARINE MGUE - Organic	- / -	- / -	8 / 0.208	10 / 0.265	- / -	10 / 0.265	10 / 0.271	12 / 0.331	- / -	- / -	- / -	40 / 1.075
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 0.208*	*- / 0.265*	*- / -*	*- / 0.265*	*- / 0.271*	*- / 0.331*	*- / -*	*- / -*	*- / 0.000*	*- / 1.075*
Subtotal: GW070: MILITARY GLOBAL POSITIONING SYSTEM (GPS) USER EQUIPMENT (MGUE)	*- / -*	*- / -*	*8 / 0.208*	*10 / 0.265*	*- / -*	*10 / 0.265*	*10 / 0.271*	*12 / 0.331*	*- / -*	*- / -*	*- / -*	*40 / 1.075*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / 0.208*	*- / 0.265*	*- / -*	*- / 0.265*	*- / 0.271*	*- / 0.331*	*- / -*	*- / -*	*- / 0.000*	*- / 1.075*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.208**	**0.265**	**0.000**	**0.265**	**0.271**	**0.331**	**0.000**	**0.000**	**0.000**	**1.075**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 10 / GW070: MILITARY GLOBAL POSITIONING SYSTEM (GPS) USER EQUIPMENT (MGUE)

ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**

Modification Item 1 of 1: GW070: MILITARY GLOBAL POSITIONING SYSTEM (GPS) USER EQUIPMENT (MGUE)

Manufacturer Information

Manufacturer Name: TBD (Sub MGUE)	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Jan 2023	Jan 2024	Jan 2025			
Delivery Dates		Jul 2023	Jul 2024	Jul 2025			

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 11 / GW071: NAVIGATION NETWORKS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	5.234	30.542	0.000	30.542	15.734	15.677	3.385	0.000	0.000	70.572
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	5.234	30.542	0.000	30.542	15.734	15.677	3.385	0.000	0.000	70.572
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**5.234**	**30.542**	**0.000**	**30.542**	**15.734**	**15.677**	**3.385**	**0.000**	**0.000**	**70.572**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

GW071 title change from Navigation Critical Distribution System to Navigation Networks to incorporate NCDS and NDDS.
This Cost Element was added in PB22 cycle with funding and program responsibility transferred from LI 0946 (NAVIGATION DATA DISTRIBUTION SYSTEM (NDDS) NETWORK INSTALLATION) and LI 0933 (Navigation Critical Data Distribution (NavCrit)) to LI 0670 starting in FY23.
These funds are required for the procurement and installation of Navigation Critical Distribution System (NCDS) and Navigation Data Distribution System (NDDS) on amphibious ships and carriers.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 11 / GW071: NAVIGATION NETWORKS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW071: NAVIGATION NETWORKS	**Modification Type:** GW071: NAVIGATION NETWORKS	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: GW071: NAVIGATION NETWORKS												
B Kits												
Recurring												
1.1.1) AMPHIB Navigation Critical Distribution System (NCDS) Procurement - NonOrganic [40]	- / -	- / -	1 / 1.872	4 / 11.712	- / -	4 / 11.712	2 / 5.973	1 / 3.046	- / -	- / -	- / -	8 / 22.603
1.1.2) AMPHIB Navigation Data Distribution System (NDDS) Procurement - NonOrganic [41]	- / -	- / -	- / -	5 / 7.000	- / -	5 / 7.000	- / -	- / -	- / -	- / -	- / -	5 / 7.000
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 1.872*	*- / 18.712*	*- / -*	*- / 18.712*	*- / 5.973*	*- / 3.046*	*- / -*	*- / -*	*- / 0.000*	*- / 29.603*
Subtotal: GW071: NAVIGATION NETWORKS	*- / -*	*- / -*	*1 / 1.872*	*9 / 18.712*	*- / -*	*9 / 18.712*	*2 / 5.973*	*1 / 3.046*	*- / -*	*- / -*	*- / -*	*13 / 29.603*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / 1.872*	*- / 18.712*	*- / -*	*- / 18.712*	*- / 5.973*	*- / 3.046*	*- / -*	*- / -*	*- / 0.000*	*- / 29.603*
Installation												
Modification Item 1 of 1: GW071: NAVIGATION NETWORKS	- / 0.000	- / 0.000	- / 3.362	- / 11.830	- / 0.000	- / 11.830	- / 9.761	- / 12.631	- / 3.385	- / 0.000	- / 0.000	- / 40.969
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 3.362*	*- / 11.830*	*- / -*	*- / 11.830*	*- / 9.761*	*- / 12.631*	*- / 3.385*	*- / -*	*- / 0.000*	*- / 40.969*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**5.234**	**30.542**	**0.000**	**30.542**	**15.734**	**15.677**	**3.385**	**0.000**	**0.000**	**70.572**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 11 / GW071: NAVIGATION NETWORKS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: GW071: NAVIGATION NETWORKS

Manufacturer Information

Manufacturer Name: Multiple Vendors	Manufacturer Location: Multiple
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates			Jun 2024				
Delivery Dates			Jun 2025				

Manufacturer Name: Multiple Vendors (42)	Manufacturer Location: Multiple
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	
Delivery Dates		Jan 2024	Jul 2025	Jul 2026	Jul 2027	Jul 2028	

Installation Information

Method of Implementation: TBD:: Installation Name: AMPHIB Navigation Critical Distribution System (NCDS) Procurement

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 3.362	1 / 0.000	0 / 0.000	1 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.362
FY 2024	- / -	- / -	- / -	0 / 3.190	0 / 0.000	0 / 3.190	1 / 9.761	3 / 0.000	- / -	- / -	0 / 0.000	4 / 12.951
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 6.638	2 / 0.000	- / -	0 / 0.000	2 / 6.638
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.385	1 / 0.000	0 / 0.000	1 / 3.385
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	0 / 3.362	1 / 3.190	0 / 0.000	1 / 3.190	1 / 9.761	3 / 6.638	2 / 3.385	1 / 0.000	0 / 0.000	8 / 26.336

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 11 / GW071: NAVIGATION NETWORKS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: GW071: NAVIGATION NETWORKS

Installation Information

Method of Implementation: TBD:: Installation Name: AMPHIB Navigation Critical Distribution System (NCDS) Procurement

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	3	-	-	-	-	2	-	-	-	1	-	-	-	8
Out	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	3	-	-	-	-	2	-	-	-	1	-	-	-	8

Method of Implementation: [none specified]:: Installation Name: AMPHIB Navigation Data Distribution System (NDDS) Procurement

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	0 / 8.640	0 / 0.000	0 / 8.640	3 / 0.000	2 / 5.993	- / -	- / -	0 / 0.000	5 / 14.633
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	0 / 8.640	0 / 0.000	0 / 8.640	3 / 0.000	2 / 5.993	- / -	- / -	0 / 0.000	5 / 14.633

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	5
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	5

Footnotes:

(40) AMPHIB NCDS PROCUREMENT: Based on current data Production lead time has increased from 12 months in FY23 to 18 months in FY24 and beyond due to longer material lead times. For installations, funding is required one year in advance due to AIT contract lead-time. Procurement unit cost increased from FY23 to FY24 due to a higher unit cost ($2.928M) for LHD configurations. LPD configuration unit cost in FY23 is $1.872M. Increase in procurement units in FY24 and FY25 is based on the latest fielding plan. NCDS manufacturers: Hexagon (Huntsville, Alabama), PRISM Maritime (Chesapeake, VA), Leidos (Sterling, VA), and Rockwell (Mayfield Heights, OH). FY23 installation funding was reduced by $3.199M due to an unjustified request

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 11 / GW071: NAVIGATION NETWORKS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(41) For installations, funding is required one year in advance due to AIT contract lead-time. NDDS manufacturers: Lyme Computing Solutions for Siemens, Raytheon (San Diego, CA), and Brandywine (California).

(42) PLT increased from 12 months in FY23 to 18 months in FY24 and beyond based on longer material lead times.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 12 / GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	7.344	8.323	0.000	8.323	8.490	10.608	11.041	11.262	1.149	58.217
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	7.344	8.323	0.000	8.323	8.490	10.608	11.041	11.262	1.149	58.217
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**7.344**	**8.323**	**0.000**	**8.323**	**8.490**	**10.608**	**11.041**	**11.262**	**1.149**	**58.217**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Cost Element reflects a transition from development(PE 0204228N) to production in FY 2023.

These funds are required for the procurement and installation of Automated Celestial Navigation System (ACNS) on surface ships.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 12 / GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM	**Modification Type:** GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM												
B Kits												
Recurring												
1.1.1) SURFACE ACNS - NonOrganic	- / -	- / -	4 / 7.344	4 / 7.491	- / -	4 / 7.491	4 / 7.641	5 / 9.742	5 / 9.937	5 / 10.136	- / -	27 / 52.291
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 7.344*	*- / 7.491*	*- / -*	*- / 7.491*	*- / 7.641*	*- / 9.742*	*- / 9.937*	*- / 10.136*	*- / 0.000*	*- / 52.291*
Subtotal: GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM	*- / -*	*- / -*	*4 / 7.344*	*4 / 7.491*	*- / -*	*4 / 7.491*	*4 / 7.641*	*5 / 9.742*	*5 / 9.937*	*5 / 10.136*	*- / -*	*27 / 52.291*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / 7.344*	*- / 7.491*	*- / -*	*- / 7.491*	*- / 7.641*	*- / 9.742*	*- / 9.937*	*- / 10.136*	*- / 0.000*	*- / 52.291*
Installation												
Modification Item 1 of 1: GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM	- / 0.000	- / 0.000	- / 0.000	- / 0.832	- / 0.000	- / 0.832	- / 0.849	- / 0.866	- / 1.104	- / 1.126	- / 1.149	- / 5.926
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.832*	*- / -*	*- / 0.832*	*- / 0.849*	*- / 0.866*	*- / 1.104*	*- / 1.126*	*- / 1.149*	*- / 5.926*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**7.344**	**8.323**	**0.000**	**8.323**	**8.490**	**10.608**	**11.041**	**11.262**	**1.149**	**58.217**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	**P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment	**Modification Number / Title:** 12 / GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: GW072: AUTOMATED CELESTIAL NAVIGATION SYSTEM

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	
Delivery Dates		Jan 2024	Jan 2025	Jan 2026	Jan 2027	Jan 2028	

Installation Information

Method of Implementation: TBD:: Installation Name: SURFACE ACNS

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	4 / 0.832	0 / 0.000	4 / 0.832	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.832
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.849	- / -	- / -	- / -	0 / 0.000	4 / 0.849
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.866	- / -	- / -	0 / 0.000	4 / 0.866
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.104	- / -	0 / 0.000	5 / 1.104
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.126	0 / 0.000	5 / 1.126
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.149	5 / 1.149
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	4 / 0.832	0 / 0.000	4 / 0.832	4 / 0.849	4 / 0.866	5 / 1.104	5 / 1.126	5 / 1.149	27 / 5.926

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	-	-	-	4	-	-	-	5	-	-	-	5	-	-	5	27
Out	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	-	-	-	4	-	-	-	5	-	-	-	5	-	-	5	27

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	550.253	209.792	261.011	262.951	0.000	262.951	289.922	274.693	285.958	290.554	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	550.253	209.792	261.011	262.951	0.000	262.951	289.922	274.693	285.958	290.554	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**550.253**	**209.792**	**261.011**	**262.951**	**0.000**	**262.951**	**289.922**	**274.693**	**285.958**	**290.554**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	31.376	31.506	46.688	-	46.688	49.107	46.735	47.619	49.892	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Submarine Periscope, Imaging, and Support Equipment program provides critical electromagnetic systems to all classes of submarine platforms. This includes Imaging, Electronic Warfare (EW), and RADAR systems which provide navigation safety and collision avoidance, particularly in high intensity littoral operations so that surveillance and weapons systems can be effectively employed. Integrated Submarine Imaging System (ISIS) and EW BLQ-10 systems are part of the Submarine Warfare Federated Tactical Systems (SWFTS), a family of interdependent systems that conduct cooperative system development, procurement, and installations. PMS435 procures and installs ISIS and EW BLQ-10 Technical Insertion (TI) shipsets, along with the other SWFTS Participating Acquisition Resource Managers (PARMs), PMS401 (A-RCI) under BLI 2150 and PMS425 (BYG-1) under BLI 5420. SWFTS TI shipsets must be procured and installed in like quantities (except EW SSBN) across all PARMs to maintain the SWFTS model.

The Submarine Periscopes and Imaging Equipment Program procures ISIS including Type 18 and Type 8 periscope upgrades; the Photonics Mast and its variants, including the Type 20 and Type 24; inboard hardware kits; imaging upgrades for all submarine classes; Photonics land-based spares, depot tooling and mast maintenance equipment. ISIS supports high intensity operations in the littorals, providing the submarine force with the tactical imaging systems necessary to safely and effectively employ its surveillance and weapons capabilities. The infrared imaging capability provided by ISIS provides all weather imaging capability, improving imaging at night and in low visibility conditions. Technology Insertion initiatives include the common control and displays hardware and software on all platforms regardless of imaging sensors, an integrated imaging system that provides for operator alerts, imaging enhancement tools and contact analysis tools, incorporation of Type 20 Mast, Type 24 Mast, future sensors, and a fully Submarine Warfare Federated Tactical System (SWFTS) integrated system. Funding improves submarine imaging capability in the areas of: ship safety, Intelligence, Surveillance and Reconnaissance (ISR), and tactical control (contact management in the littorals) by providing high quality imaging 24 hours a day, 7 days a week in all weather conditions to support submarine operations worldwide.

By OPNAV Ltr Ser. N77/3U629209, 12 June 2003, OPNAV N87 established the ISIS to rapidly field these systems and integrate existing periscope imagery systems into a single system for installation on board submarines. An ISIS Capability Development Document (CDD) was approved 22 Dec 2011, with an update to the CDD approved on 15 Mar 2018 and a CDD Annex for Low Profile Digital Photonics Mast approved on 02 Dec 2019. The CDD is used to fully integrate the ISIS program of record into the submarine force's rapid technology insertion process and to incorporate Fleet-endorsed requirements such as Low Profile Photonics Mast (LPPM).

PL010 - Imaging ISIS Technical Insertion
Continues procurement and engineering of Technical Insertion kits, Design Services Allocation (DSA) installation support, and spares to upgrade ISIS systems on LOS ANGELES, SEAWOLF, VIRGINIA and OHIO Class SSGN/SSBN platforms to allow for capability insertion and obsolescence avoidance. Starting with TI-16, funding includes the one time change for improved copper-fiber optic diploops and hull penetrators (Mast Compatibility) required to support advanced Imaging and early warning capabilities included in LPPM, Type 20, and Type 24 Masts.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

PL011 - Imaging Upgrades: Type 8/Type 18
Continues procurement of Periscopes and Imaging Equipment reliability, capability, and maintainability upgrades, e.g., Eyepiece Box, periscope mechanical hoisting mechanism upgrades, inboard electronic processing hardware and associated Integrated Logistics Support (ILS), Robust Surveillance Program, Certification of regional repair centers for Imaging System maintenance and technical data. Variable quantities and types are bought in each fiscal year based on Fleet-endorsed requirements.

PL012 - Periscope Special Support Equipment
Procures replacements in support of Special Support Equipment (SSE) for each maintenance level to ensure imaging systems are maintained in a state of operational readiness. Equipment includes Q-Band Test Equipment, Mast Dynamic Collimator, Eyebox/Mast Test Set, and Antenna/Outer Head Simulator required due to obsolescence of existing imaging systems SSE.

PL015 - Periscope Interim Contractor Support
Funding is for Interim Contract Support provided by the periscope manufacturer. The majority of the funding is for Type 18 service life extension, depot repair and upgrades for all configurations of Photonics Masts including LPPM and Type 20 masts. It also funds all levels of repairs for all types of tactical submarine imaging systems and establishes the Photonics National Maintenance Center (NMC) to accelerate availability and delivery of photonics masts to the fleet.

PL016 - Periscope Training
Funding is for imaging systems training requirements to include curriculum development, training materials, and initial factory training pilot course conduct, Navy Training Plans, and instructor advisory services.

PL025 - Low Profile Mast
Funding is for the procurement, support and technical insertion of VIRGINIA Class low profile imaging masts (including LPPM, Type 20, and Type 24) production modules and land based spare masts and associated components. The spares will be used for replacement Imaging Masts on VIRGINIA Class submarines. Quantity of spares will increase with VIRGINIA submarine procurements. Funding is also for Type 20 Mast Capability Enhancements (MCE) and System for Non-Acoustics Control of Signatures (SNACS) capabilities to provide advanced sensitive mast technologies to improve tactical operations and reduce the risk of counter detection.

PL830 - Periscope Production Engineering
Production Engineering funds provide the following functions: value engineering; review and evaluation of production design data and documentation; production configuration control; maintenance engineering efforts designed and incorporated into the production manufacturing process, and other related engineering functions that are integral to all of the Imaging Systems and ancillary components.

PL927 - Fleet Modernization Program Installs
Funding is for the installation of Fleet Modernization Program Equipment.

PL4M7 - Non-Fleet Modernization Program Installs
Funding is for the installation of non-Fleet Modernization Program Equipment.

The Submarine Support Equipment Program (SSEP) procures submarine Electronic Warfare (EW) systems: AN/BLQ-10, Multifunction Modular Masts (MMM) Payloads, Communications Acquisition and Direction-Finding (CADF) systems, Electronic Warfare Tactical Upgrade (EWTU), Field Change Kits, PATRIOT and BPS 15/16/17 RADARs. The SSEP also supports all ILS, production engineering, Cyber, sustainment, and installation requirements for EW systems. The Technical Insertion/Advanced Processing Build (TI/APB) SWFTS model modernizes and sustains approximately 8-12 SSNs/SSGNs per year through executing bi-annual software APBs and bi-annual hardware TIs. SWFTS related annual funding varies based on the number of modernizations funded. The Submarine EW Capability Development Document (CDD) 907-97-16 was approved on 27 September 2016 and provides all requirements for Submarine EW systems. Both the EWTU and the AN/BLQ-10 are required to meet the Submarine EW CDD. Procurement of the EWTU fills the gap in CADF capability in VA BLK IV to meet the EW CDD requirements. A gap was created when the CADF production line closed at the end of VA BLK III production and the subsequent cancellation of TI-16/18 NGA contracts, which would have replaced ICADF.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

ML003 - SSEP Special Support Equipment
SSEP special support equipment allows for the procurement and grooming of special purpose test equipment utilized by the Type Commander Groom Teams. Exact quantities vary from year to year based on Fleet requirements.

ML007 - CADF
Procures the Server Based Communications Acquisition and Direction Finding (SB-CADF) systems for installation on LOS ANGELES, SEAWOLF and VIRGINIA Class submarines.

ML009 - EWTU (previously named EWTT)
Procures and refurbishes the Electronic Warfare Tactical Upgrade (EWTU) filling the gap in CADF capability on VA Class BLK IV submarines necessary to meet EW CDD requirements. A gap was created when the CADF production line closed at the end of VA BLK III production and the subsequent cancellation of TI-16/18 NGA contracts, which would have replaced ICADF.

ML012 (P-40a) - SWFTS Supportability and Integration
Tech Refresh provides for software and hardware updates to accommodate shifts in technology to the execution procurement years "current state-of-the-practice" hardware. Updates are necessary for signal and display processing hardware as software is introduced or as commercial support for the hardware is phased out. The EW Engineering Measurement Program provides analytical and testing support to improve design and requirements. When EW systems are being upgraded to subsequent phases, signal processing and display hardware will be upgraded to accommodate common technology consistent with the APB being implemented in the year of introduction. In future years, requirements include additional equipment to prevent COTS hardware from becoming unsupportable/obsolete. Funding will be used to support non-recurring first article test efforts associated with changing COTS environment, procuring test equipment and simulators. Supports Government Furnished Information (GFI) management and coordination, monitoring of contractor cost, performance and schedule, cost analysis and estimation, contract specification development and monitoring of contract deliverables. Addresses the Cyber requirements associated with procuring, engineering and sustaining EW systems. Also supports EW system training requirements to include curriculum development, training materials, and initial factory training pilot course conduct, Navy Training Plans, instructor advisory services, and hardware/software upgrades for EW trainers.

ML012 (P-3a) - AN/BLQ-10 Technical Insertion
Procures the AN/BLQ-10 EW system for installation on LOS ANGELES, SEAWOLF, and VIRGINIA Class submarines beginning with TI-20. AN/BLQ-10 achieves EW superiority through hardware and software updates to pace the threat and brings EW fully onto the SWFTS model. Tech insertion procures the hardware necessary to upgrade and back-fit EW systems. This system will be fully aligned with SWFTS with the exception of SSBN (OHIO) Class and provides capabilities required by the EW Capability Development Document (CDD).

ML014 - Legacy Submarine Surveillance Measures
Continues legacy Submarine Electronic Surveillance Measures (SubESM) procurement including AN/BRD-7 and AN/WLR-8 Reliability and Maintainability (R&M) obsolescence and operational Field Change Kits and other materials for Obsolescence Mitigation, e.g., Digital Display Unit (DDU) obsolescence upgrade, Solid State Memory, Heat Dissipation improvement, related H,M&E sail components, Analog relay replacement, antenna cabling replacement, related Hull, Mechanical & Electrical (H,M&E) sail components and associated Integrated Logistics Support (ILS), and technical data.

ML017 - AN/BLQ-10 Field Change Kits
Procures AN/BLQ-10 subsystem Product Improvement Field Change Kits including: emergent Engineering Changes, SWFTS associated Integrated Logistics Support (ILS) and technical data. Provides AN/BLQ-10 intermediate level repairs, changes and maintenance activities and associated materials that improve the overall Reliability, Maintainability and Availability of fielded EW systems. Procures sustainment efforts for AN/BLQ-10 active, deploying fleet assets. Provides funding for procurement of MMM Payload to support submarine Fleet required improved Unmanned Aerial System (UAS) communications and advanced EW capabilities. Procures Electronic Surveillance Measures (ESM) Electronics Assembly (EEA) and Antenna Assembly (AA) to increase the Ao of current masts and improve the capabilities for future antennas and inboard systems. Procures Submarine Tethered Expendable Buoy (STEB), a 3" Launcher deployed, expendable, free-floating buoy that will communicate with the submarine through a fiber-optic tether. STEB provides Indications and Warning and Third Party Targeting through imaging, communications, and Radar acquisition and direction finding.

ML021 - Submarine RADAR
Submarine RADAR funds provide AN/BPS-15/16/17 Reliability, Maintainability and Availability (RMA), Field Change Kits and material procurements for obsolescence mitigation. Provides in-service and systems engineering, logistics, material, configuration management, quality assurance, installation and test certification support only for the Submarine Surface Navigation (AN/BPS-15/16/17) RADAR. Provides for

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

interface with the conjoined Voyage Management System (VMS) and Electronic Chart & Display Information System - Navy (ECDIS-N). Funding addresses sustainability of PATRIOT Phase B RADAR including repair/refurbishment, in-service engineering, and modernization.

ML830 - EW Production Engineering
Production Engineering funds provide the following functions: value engineering; review and evaluation of production design data and documentation; production configuration control; maintenance engineering efforts designed and incorporated into the production manufacturing process, and other related engineering functions that are integral to all production EW Systems and upgrades.

ML927 - Fleet Modernization Program Installs
Provides for the Installation of Equipment including Fleet Modernization Program Installations for shipboard systems.

ML4M7 - Non-Fleet Modernization Program Installs
Provides for the Installation of non-Fleet Modernization Program Equipment.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	SUBMARINE PERISCOPES & IMAGING EQUIPMENT				- / 79.603	- / 16.346	- / 20.787	- / 16.562	- / -	- / 16.562
P-40a	SUBMARINE SUPPORT EQUIPMENT PROGRAM				- / 111.648	- / 53.835	- / 57.274	- / 50.000	- / -	- / 50.000
P-3a	1 / PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS) (ORDALT)				- / 187.762	- / 33.161	- / 25.943	- / 39.603	- / 0.000	- / 39.603
P-3a	2 / PL011 IMAGING UPGRADES: TYPE 8/TYPE 18 (ORDALT)				- / 1.919	- / 1.025	- / 0.416	- / 0.425	- / 0.000	- / 0.425
P-3a	3 / PL025 LOW PROFILE IMAGING MAST (SHIPALT)				- / 27.893	- / 30.845	- / 52.100	- / 43.864	- / 0.000	- / 43.864
P-3a	4 / ML007 CADF (SWFTS) (SHIPALT)				- / 0.000	- / 4.784	- / 20.020	- / 21.960	- / 0.000	- / 21.960
P-3a	5 / ML009- EWTU (formerly named EWTT) (OPALT)				- / 22.034	- / 12.230	- / 0.788	- / 0.000	- / 0.000	- / 0.000
P-3a	6 / ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS) (SHIPALT)				- / 45.072	- / 37.702	- / 59.836	- / 69.744	- / 0.000	- / 69.744
P-3a	7 / ML017 AN/BLQ-10 FIELD CHANGE KITS (ORDALT)				- / 74.322	- / 19.864	- / 23.847	- / 20.793	- / 0.000	- / 20.793
P-40	**Total Gross/Weapon System Cost**				**- / 550.253**	**- / 209.792**	**- / 261.011**	**- / 262.951**	**- / 0.000**	**- / 262.951**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	SUBMARINE PERISCOPES & IMAGING EQUIPMENT				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	SUBMARINE SUPPORT EQUIPMENT PROGRAM				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS) (ORDALT)				- / 43.307	- / 36.368	- / 35.079	- / 41.096	Continuing	Continuing
P-3a	2 / PL011 IMAGING UPGRADES: TYPE 8/TYPE 18 (ORDALT)				- / 0.434	- / 0.443	- / 0.452	- / 0.461	Continuing	Continuing
P-3a	3 / PL025 LOW PROFILE IMAGING MAST (SHIPALT)				- / 54.369	- / 45.336	- / 46.458	- / 47.166	Continuing	Continuing
P-3a	4 / ML007 CADF (SWFTS) (SHIPALT)				- / 21.880	- / 22.848	- / 23.304	- / 23.768	Continuing	Continuing
P-3a	5 / ML009- EWTU (formerly named EWTT) (OPALT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 35.052
P-3a	6 / ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS) (SHIPALT)				- / 66.700	- / 72.560	- / 74.008	- / 75.488	Continuing	Continuing
P-3a	7 / ML017 AN/BLQ-10 FIELD CHANGE KITS (ORDALT)				- / 31.906	- / 36.185	- / 43.302	- / 44.318	Continuing	Continuing
P-40	**Total Gross/Weapon System Cost**				**- / 289.922**	**- / 274.693**	**- / 285.958**	**- / 290.554**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

IMAGING - FY2024 procures TI-22 on (1) LA Class and (1) SEAWOLF Class submarine and TI-24 on (6) VA Class submarines in support of Submarine Warfare Federated Tactical System (SWFTS). FY24 installs TI-22 on (7) LA Class and (1) SEAWOLF Class submarine from the FY23 procurements. Overall decrease from FY23 to FY24 is driven by the conclusion of multiple non-recurring investment efforts including establishment of a Photonics National Maintenance Center (NMC) to accelerate availability and delivery of photonics masts to the fleet, TYPE-20 and ISIS Configuration Control Module (CCM) procurements to allow technical experts to replicate and speedily resolve issues identified in fielded systems, and System for Non-Acoustics Control of Signatures (SNACS) procurements to provide advanced

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

sensitive mast technologies to improve tactical operations and reduce the risk of counter detection. The conclusion of these efforts, coupled with more expensive VA Class ISIS procurements in FY2024, result in an overall decrease from FY2023 to FY2024.

EW - FY2024 procures TI-22 on (1) LA Class and (1) SEAWOLF Class submarine and TI-24 on (6) VA Class submarines in support of Submarine Warfare Federated Tactical System (SWFTS). FY2024 installs TI-22 on (7) LA Class and (1) SEAWOLF Class submarines from the FY2023 procurements. FY2024 procures (8) Server Based Communications Acquisition and Direction Finding (SB-CADF) systems for installation on LA, SEAWOLF, and VA Class submarines. The SB-CADF is the next step in moving submarine EW systems into a fully digital architecture and away from analog, proprietary systems that have proven more costly to upgrade and maintain. FY2024 funding request remains essentially unchanged from FY2023 to FY2024 due to consistent number of SWFTS AN/BLQ-10 and SB-CADF procurements.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Aggregated Items Title:** SUBMARINE PERISCOPES & IMAGING EQUIPMENT

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) PL012 PERISCOPE SPECIAL SUPPORT EQIPMENT																				
1.1) SPECIAL SUPPORT EQUIPMENT	A		-	-	2.840	-	-	0.603	-	-	0.615	-	-	0.627	-	-	-	-	-	0.627
Subtotal: 1) PL012 PERISCOPE SPECIAL SUPPORT EQIPMENT			**-**	**-**	***2.840***	**-**	**-**	***0.603***	**-**	**-**	***0.615***	**-**	**-**	***0.627***	**-**	**-**	**-**	**-**	**-**	***0.627***
2) PL015 PERISCOPE INTERIM CONTRACTOR SUPPORT																				
2.1) INTERIM CONTRACTOR SUPPORT	A		-	-	56.857	-	-	11.520	-	-	15.865	-	-	11.542	-	-	-	-	-	11.542
Subtotal: 2) PL015 PERISCOPE INTERIM CONTRACTOR SUPPORT			**-**	**-**	***56.857***	**-**	**-**	***11.520***	**-**	**-**	***15.865***	**-**	**-**	***11.542***	**-**	**-**	**-**	**-**	**-**	***11.542***
3) PL016 PERISCOPE TRAINING																				
3.1) TRAINING	A		-	-	0.946	-	-	0.201	-	-	0.205	-	-	0.209	-	-	-	-	-	0.209
Subtotal: 3) PL016 PERISCOPE TRAINING			**-**	**-**	***0.946***	**-**	**-**	***0.201***	**-**	**-**	***0.205***	**-**	**-**	***0.209***	**-**	**-**	**-**	**-**	**-**	***0.209***
4) PL830 PERISCOPE PRODUCTION ENGINEERING																				
4.1) PRODUCTION ENGINEERING	A		-	-	18.960	-	-	4.022	-	-	4.102	-	-	4.184	-	-	-	-	-	4.184
Subtotal: 4) PL830 PERISCOPE PRODUCTION ENGINEERING			**-**	**-**	***18.960***	**-**	**-**	***4.022***	**-**	**-**	***4.102***	**-**	**-**	***4.184***	**-**	**-**	**-**	**-**	**-**	***4.184***
Total			**-**	**-**	**79.603**	**-**	**-**	**16.346**	**-**	**-**	**20.787**	**-**	**-**	**16.562**	**-**	**-**	**-**	**-**	**-**	**16.562**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Aggregated Items Title:** SUBMARINE SUPPORT EQUIPMENT PROGRAM

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) ML003 SSEP SPECIAL SUPPORT EQUIPMENT																				
1.1) SPECIAL SUPPORT EQUIPMENT	A		-	-	1.711	-	-	0.363	-	-	0.370	-	-	0.377	-	-	-	-	-	0.377
Subtotal: 1) ML003 SSEP SPECIAL SUPPORT EQUIPMENT			**-**	**-**	***1.711***	**-**	**-**	***0.363***	**-**	**-**	***0.370***	**-**	**-**	***0.377***	**-**	**-**	**-**	**-**	**-**	***0.377***
2) ML012 SWFTS SUPPORTABILITY AND INTEGRATION																				
2.1) COTS TECH REFRESH	A		-	-	46.956	-	-	29.155	-	-	32.768	-	-	27.567	-	-	-	-	-	27.567
2.2) CYBER AND TRAINING SUPPORT	A		-	-	17.649	-	-	10.566	-	-	11.762	-	-	9.457	-	-	-	-	-	9.457
Subtotal: 2) ML012 SWFTS SUPPORTABILITY AND INTEGRATION			**-**	**-**	***64.605***	**-**	**-**	***39.721***	**-**	**-**	***44.530***	**-**	**-**	***37.024***	**-**	**-**	**-**	**-**	**-**	***37.024***
3) ML014 LEGACY SUBMARINE ELECTRONIC SURVEILLANCE MEASURES (SubESM)																				
3.1) LEGACY SubESM	A		-	-	1.913	-	-	0.325	-	-	0.325	-	-	0.325	-	-	-	-	-	0.325
Subtotal: 3) ML014 LEGACY SUBMARINE ELECTRONIC SURVEILLANCE MEASURES (SubESM)			**-**	**-**	***1.913***	**-**	**-**	***0.325***	**-**	**-**	***0.325***	**-**	**-**	***0.325***	**-**	**-**	**-**	**-**	**-**	***0.325***
4) ML021 SUBMARINE RADARs																				
4.1) SUBMARINE RADARs	A		-	-	26.033	-	-	9.738	-	-	8.287	-	-	8.437	-	-	-	-	-	8.437
Subtotal: 4) ML021 SUBMARINE RADARs			**-**	**-**	***26.033***	**-**	**-**	***9.738***	**-**	**-**	***8.287***	**-**	**-**	***8.437***	**-**	**-**	**-**	**-**	**-**	***8.437***
5) ML830 PRODUCTION ENGINEERING																				
5.1) PRODUCTION ENGINEERING	A		-	-	17.386	-	-	3.688	-	-	3.762	-	-	3.837	-	-	-	-	-	3.837
Subtotal: 5) ML830 PRODUCTION ENGINEERING			**-**	**-**	***17.386***	**-**	**-**	***3.688***	**-**	**-**	***3.762***	**-**	**-**	***3.837***	**-**	**-**	**-**	**-**	**-**	***3.837***
Total			**-**	**-**	**111.648**	**-**	**-**	**53.835**	**-**	**-**	**57.274**	**-**	**-**	**50.000**	**-**	**-**	**-**	**-**	**-**	**50.000**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 1 / PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	187.762	33.161	25.943	39.603	0.000	39.603	43.307	36.368	35.079	41.096	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	187.762	33.161	25.943	39.603	0.000	39.603	43.307	36.368	35.079	41.096	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**187.762**	**33.161**	**25.943**	**39.603**	**0.000**	**39.603**	**43.307**	**36.368**	**35.079**	**41.096**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides for the modernization of Imaging systems and Technical Insertion kits to upgrade Integrated Submarine Imaging System (ISIS) on LOS ANGELES, SEAWOLF, VIRGINIA and OHIO Class SSGN platforms in support of Intelligence, Surveillance and Reconnaissance (ISR) requirements. Unit costs for ISIS kit procurement and installation vary based on platform. VIRGINIA ISIS kits require a higher unit cost than the LOS ANGELES and SEAWOLF as the VIRGINIA utilizes technically advanced masts that require more sophisticated ISIS hardware and software to support them. Beginning with TI-16, each VIRGINIA requires a one-time critical modernization hardware update in order to field Low Profile Photonics Mast (LPPM), Type 20, and Type 24 Masts on these modernization hulls. This is known as Mast Compatibility (MC) and includes procurement of copper/fiber diploops and hull penetrators thus requiring a higher unit cost for VIRGINIA TI shipsets with MC. Advanced Common Dip Loop (ACDL) procurement provides significantly improved reliability and survivability of interface between photonics mast and inboard systems in accordance with Fleet requirements. This line item aligns the periscope, imaging, and support equipment with the Submarine Warfare Federated Tactical System (SWFTS) PMS401 (BLI 2150) acoustic and PMS425 (BLI 5420) combat control upgrades, as well as EW AN/BLQ-10 equipment in ML012 and EW CADF equipment in ML007 of this budget line item. SWFTS TI shipsets must be procured and installed in like quantities (except EW SSBN) across all PARMs to maintain the SWFTS model.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 1 / PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: ISIS TI	**Modification Type:** ORDALT	**Related RDT&E PEs:** 0604777N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)												
B Kits												
Recurring												
1.1.1) 688/21 TECHNICAL INSERTION (SWFTS) - NonOrganic	32 / 20.023	2 / 2.246	8 / 9.160	2 / 2.336	- / -	2 / 2.336	- / -	4 / 4.860	4 / 4.956	2 / 2.528	Continuing	Continuing
1.1.2) VA TECHNICAL INSERTION with MAST COMPATIBILITY (SWFTS) - NonOrganic (1)	11 / 54.511	2 / 10.758	- / -	2 / 11.194	- / -	2 / 11.194	- / -	- / -	- / -	- / -	Continuing	Continuing
1.1.3) VA TECHNICAL INSERTION without MAST COMPATIBILITY (SWFTS) - NonOrganic (2)	6 / 21.039	- / -	- / -	4 / 14.932	- / -	4 / 14.932	8 / 30.464	4 / 15.536	4 / 15.848	6 / 24.246	Continuing	Continuing
1.1.4) SSBN (OHIO) BACKFIT (SWFTS) - NonOrganic	14 / 2.397	- / -	- / -	3 / 0.663	- / -	3 / 0.663	2 / 0.450	3 / 0.690	3 / 0.705	2 / 0.480	Continuing	Continuing
1.1.5) SSBN (OHIO) REFURBISHMENT BACKFIT (SWFTS) - NonOrganic	- / -	- / -	1 / 0.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.050
1.1.6) ADVANCED COMMON DIP LOOP (ACDL) BACKFIT - Organic	- / -	4 / 2.412	2 / 1.230	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 3.642
1.1.7) ISIS CCM - Organic	- / -	- / -	1 / 3.660	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.660
Subtotal: Recurring	*- / 97.970*	*- / 15.416*	*- / 14.100*	*- / 29.125*	*- / -*	*- / 29.125*	*- / 30.914*	*- / 21.086*	*- / 21.509*	*- / 27.254*	*Continuing*	*Continuing*
Subtotal: PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)	*63 / 97.970*	*8 / 15.416*	*12 / 14.100*	*11 / 29.125*	*- / -*	*11 / 29.125*	*10 / 30.914*	*11 / 21.086*	*11 / 21.509*	*10 / 27.254*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 97.970*	*- / 15.416*	*- / 14.100*	*- / 29.125*	*- / -*	*- / 29.125*	*- / 30.914*	*- / 21.086*	*- / 21.509*	*- / 27.254*	*Continuing*	*Continuing*
Support *(All Modification Items)*												
2.1) ISIS TECHNICAL INSERTION NRE	- / 70.283	- / 12.526	- / 9.241	- / 7.493	- / -	- / 7.493	- / 7.643	- / 7.796	- / 7.952	- / 8.111	Continuing	Continuing
Subtotal: Support	*- / 70.283*	*- / 12.526*	*- / 9.241*	*- / 7.493*	*- / -*	*- / 7.493*	*- / 7.643*	*- / 7.796*	*- / 7.952*	*- / 8.111*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 1: PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)	- / 19.509	- / 5.219	- / 2.602	- / 2.985	- / 0.000	- / 2.985	- / 4.750	- / 7.486	- / 5.618	- / 5.731	- / 8.996	- / 62.896
Subtotal: Installation	*- / 19.509*	*- / 5.219*	*- / 2.602*	*- / 2.985*	*- / -*	*- / 2.985*	*- / 4.750*	*- / 7.486*	*- / 5.618*	*- / 5.731*	*- / 8.996*	*- / 62.896*
Total												
Total Cost (Procurement + Support + Installation)	**187.762**	**33.161**	**25.943**	**39.603**	**0.000**	**39.603**	**43.307**	**36.368**	**35.079**	**41.096**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 1 / PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)

Manufacturer Information

Manufacturer Name: Lockheed Martin Corporation (3) | Manufacturer Location: Manassas, VA

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Mar 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	Jan 2028
Delivery Dates	Mar 2023	Mar 2024	Mar 2025	Jul 2026	Jul 2027	Jul 2028	Jul 2029

Installation Information

Method of Implementation: AIT:: Installation Name: 688/21 TECHNICAL INSERTION (SWFTS)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	32 / 8.383	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	32 / 8.383
FY 2022	- / -	- / -	2 / 0.698	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.698
FY 2023	- / -	- / -	- / -	8 / 2.848	0 / 0.000	8 / 2.848	- / -	- / -	- / -	- / -	0 / 0.000	8 / 2.848
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.726	- / -	- / -	- / -	0 / 0.000	2 / 0.726
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.508	- / -	0 / 0.000	4 / 1.508
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.540	0 / 0.000	4 / 1.540
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.786	2 / 0.786
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	32 / 8.383	- / -	2 / 0.698	8 / 2.848	0 / 0.000	8 / 2.848	2 / 0.726	- / -	4 / 1.508	4 / 1.540	2 / 0.786	54 / 16.489

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	32	-	-	-	-	-	1	1	-	-	3	3	2	-	-	-	2	-	-	-	-	-	-	-	4	-	-	-	4	2	54
Out	32	-	-	-	-	-	1	1	-	-	3	3	2	-	-	-	2	-	-	-	-	-	-	-	4	-	-	-	4	2	54

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 1 / PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)

Installation Information

Method of Implementation: AIT:: Installation Name: VA TECHNICAL INSERTION with MAST COMPATIBILITY (SWFTS)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	10 / 8.711	1 / 0.933	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 9.644
FY 2022	- / -	- / -	2 / 1.904	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.904
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.980	- / -	- / -	- / -	0 / 0.000	2 / 1.980
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	10 / 8.711	1 / 0.933	2 / 1.904	- / -	- / -	- / -	2 / 1.980	- / -	- / -	- / -	0 / 0.000	15 / 13.528

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	10	-	1	-	-	-	1	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Out	10	-	1	-	-	-	1	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	15

Method of Implementation: AIT:: Installation Name: VA TECHNICAL INSERTION without MAST COMPATIBILITY (SWFTS)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 0.815	5 / 4.155	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 4.970
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.764	2 / 1.800	- / -	- / -	0 / 0.000	4 / 3.564
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 5.400	2 / 1.836	- / -	0 / 0.000	8 / 7.236
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.836	2 / 1.872	0 / 0.000	4 / 3.708
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.872	2 / 1.910	4 / 3.782
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 5.844	6 / 5.844

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 1 / PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)

Installation Information

Method of Implementation: AIT:: Installation Name: VA TECHNICAL INSERTION without MAST COMPATIBILITY (SWFTS)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.815	5 / 4.155	- / -	- / -	- / -	- / -	2 / 1.764	8 / 7.200	4 / 3.672	4 / 3.744	8 / 7.754	32 / 29.104

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	6	2	-	-	2	2	-	-	2	8	32
Out	1	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	6	2	-	-	2	2	-	-	2	8	32

Method of Implementation: AIT:: Installation Name: SSBN (OHIO) BACKFIT (SWFTS)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	13 / 1.600	1 / 0.131	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 1.731
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.280	1 / 0.143	- / -	- / -	0 / 0.000	3 / 0.423
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.143	1 / 0.146	- / -	0 / 0.000	2 / 0.289
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.292	1 / 0.149	0 / 0.000	3 / 0.441
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.298	1 / 0.152	3 / 0.450
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.304	2 / 0.304
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	13 / 1.600	1 / 0.131	- / -	- / -	- / -	- / -	2 / 0.280	2 / 0.286	3 / 0.438	3 / 0.447	3 / 0.456	27 / 3.638

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 1 / PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)

Installation Information

Method of Implementation: AIT:: Installation Name: SSBN (OHIO) BACKFIT (SWFTS)

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	13	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	1	1	-	-	2	1	-	-	2	3	27
Out	13	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	1	1	-	-	2	1	-	-	2	3	27

Method of Implementation: AIT:: Installation Name: SSBN (OHIO) REFURBISHMENT BACKFIT (SWFTS)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	1 / 0.137	0 / 0.000	1 / 0.137	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.137
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.137	0 / 0.000	1 / 0.137	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.137

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Method of Implementation (Organic): ADVANCED COMMON DIP LOOP (ACDL) BACKFIT - Not Installed **Installation Quantity:** 6

Method of Implementation (Organic): ISIS CCM - Not Installed **Installation Quantity:** 1

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 1 / PL010 - IMAGING ISIS TECHNICAL INSERTION (SWFTS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Footnotes:

(1) The VA TI with Mast Compatibility (MC) kit is a one-time critical modernization hardware upgrade required for every VA platform and includes funding for the procurement of the Common Electrical Hull Penetrator and Common Dip Loop which is required for TI-16 and beyond installations. The Common Electrical Hull Penetrator and Common Dip Loop provides the required interface for current photonics masts, including the LPPM and supports all future mast types. As a result, unit cost is higher than VA TI without MC.

(2) VA Technical Insertion without Mast Compatibility (MC), documented in 1.1.3 procures hardware required for TI installations on platforms which have already received the Common Electrical Hull Penetrator and Common Dip Loop during a prior modernization or during new construction. Unit cost is higher than 688/21 TI due to greater processing and larger footprint.

(3) Starting in FY24, shorten Administrative Leadtime by two months and increase Production Leadtime by six months to address long lead material and supply chain issues.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 2 / PL011 IMAGING UPGRADES: TYPE 8/TYPE 18
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1.919	1.025	0.416	0.425	0.000	0.425	0.434	0.443	0.452	0.461	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1.919	1.025	0.416	0.425	0.000	0.425	0.434	0.443	0.452	0.461	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1.919**	**1.025**	**0.416**	**0.425**	**0.000**	**0.425**	**0.434**	**0.443**	**0.452**	**0.461**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Provides obsolescence related upgrades for Submarine Periscopes. One (1) set is procured in each fiscal year that includes variable quantities and types based on Fleet-endorsed requirements.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 2 / PL011 IMAGING UPGRADES: TYPE 8/TYPE 18
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: TYPE 8/TYPE 18	**Modification Type:** ORDALT	**Related RDT&E PEs:** 0604777N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: PL011 IMAGING UPGRADES: TYPE 8/TYPE 18												
B Kits												
Recurring												
1.1.1) TYPE 8/TYPE 18 - NonOrganic	72 / 1.305	1 / 0.894	1 / 0.282	1 / 0.288	- / -	1 / 0.288	1 / 0.294	1 / 0.300	1 / 0.306	1 / 0.312	Continuing	Continuing
Subtotal: Recurring	*- / 1.305*	*- / 0.894*	*- / 0.282*	*- / 0.288*	*- / -*	*- / 0.288*	*- / 0.294*	*- / 0.300*	*- / 0.306*	*- / 0.312*	*Continuing*	*Continuing*
Subtotal: PL011 IMAGING UPGRADES: TYPE 8/TYPE 18	*72 / 1.305*	*1 / 0.894*	*1 / 0.282*	*1 / 0.288*	*- / -*	*1 / 0.288*	*1 / 0.294*	*1 / 0.300*	*1 / 0.306*	*1 / 0.312*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 1.305*	*- / 0.894*	*- / 0.282*	*- / 0.288*	*- / -*	*- / 0.288*	*- / 0.294*	*- / 0.300*	*- / 0.306*	*- / 0.312*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 1: PL011 IMAGING UPGRADES: TYPE 8/TYPE 18	- / 0.614	- / 0.131	- / 0.134	- / 0.137	- / 0.000	- / 0.137	- / 0.140	- / 0.143	- / 0.146	- / 0.149	- / 152.000	- / 153.594
Subtotal: Installation	*- / 0.614*	*- / 0.131*	*- / 0.134*	*- / 0.137*	*- / -*	*- / 0.137*	*- / 0.140*	*- / 0.143*	*- / 0.146*	*- / 0.149*	*- / 152.000*	*- / 153.594*
Total												
Total Cost (Procurement + Support + Installation)	**1.919**	**1.025**	**0.416**	**0.425**	**0.000**	**0.425**	**0.434**	**0.443**	**0.452**	**0.461**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 2 / PL011 IMAGING UPGRADES: TYPE 8/TYPE 18

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL011 IMAGING UPGRADES: TYPE 8/TYPE 18

Manufacturer Information

Manufacturer Name: Multiple Vendors | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 14

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Mar 2023	Mar 2024	Mar 2025	Mar 2026	Mar 2027	Mar 2028
Delivery Dates	May 2023	May 2024	May 2025	May 2026	May 2027	May 2028	May 2029

Installation Information

Method of Implementation: AIT:: Installation Name: TYPE 8/TYPE 18

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	71 / 0.614	1 / 0.131	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	72 / 0.745
FY 2022	- / -	- / -	1 / 0.134	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.134
FY 2023	- / -	- / -	- / -	1 / 0.137	0 / 0.000	1 / 0.137	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.137
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.140	- / -	- / -	- / -	0 / 0.000	1 / 0.140
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.143	- / -	- / -	0 / 0.000	1 / 0.143
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.146	- / -	0 / 0.000	1 / 0.146
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.149	0 / 0.000	1 / 0.149
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 152.000	1 / 152.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	71 / 0.614	1 / 0.131	1 / 0.134	1 / 0.137	0 / 0.000	1 / 0.137	1 / 0.140	1 / 0.143	1 / 0.146	1 / 0.149	1 / 152.000	79 / 153.594

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	71	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	1	79
Out	71	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	1	79

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 3 / PL025 LOW PROFILE IMAGING MAST
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	27.893	30.845	52.100	43.864	0.000	43.864	54.369	45.336	46.458	47.166	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	27.893	30.845	52.100	43.864	0.000	43.864	54.369	45.336	46.458	47.166	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**27.893**	**30.845**	**52.100**	**43.864**	**0.000**	**43.864**	**54.369**	**45.336**	**46.458**	**47.166**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

VA Class advanced low profile imaging masts including Low Profile Photonics Mast (LPPM), Type 20, and Type 24 masts. Procures initial modernization assets as well as spare masts to maintain overall spares ratio for photonics masts as quantity of VA Class submarines increase and special support tooling to enable the maintenance and repair of such masts at Regional Repair Centers. Maintaining sufficient quantities of installed and spare low profile imaging masts is essential to meet Fleet requirements for all deploying VA class submarines to be equipped with low profile imaging masts. Procure support equipment to allow repair of low profile masts at Regional Repair Centers which reduces Mean Time to Repair, thereby increasing Operational Availability of Low Profile Masts to meet Fleet requirements. Includes equipment comprising of module test set, alignment fixtures, test equipment, and repair tooling. PL025 funds Type 20 Mast Capability Enhancements (MCE) and System for Non-Acoustics Control of Signatures (SNACS) capabilities to provide advanced sensitive mast technologies to improve tactical operations and reduce the risk of counter detection. Also funds a Type 20 Configuration Control Model and I-level depot capability.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 3 / PL025 LOW PROFILE IMAGING MAST
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: Photonics Mast	**Modification Type:** SHIPALT	**Related RDT&E PEs:** 0604777N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: PL025 LOW PROFILE IMAGING MAST												
B Kits												
Recurring												
1.1.1) TYPE 20 MAST - NonOrganic	3 / 27.893	2 / 19.092	3 / 29.211	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 76.196
1.1.2) TYPE 20 CCM - Organic	- / -	- / -	1 / 9.736	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 9.736
1.1.3) MAST CAPABILITY ENHANCEMENT - NonOrganic (4)	- / -	- / -	6 / 2.670	6 / 2.724	- / -	6 / 2.724	6 / 2.778	6 / 2.832	6 / 2.886	6 / 2.946	Continuing	Continuing
1.1.4) TYPE 24 MAST - NonOrganic	- / -	- / -	- / -	4 / 39.728	- / -	4 / 39.728	5 / 50.655	4 / 41.336	4 / 42.164	- / -	- / -	17 / 173.883
1.1.5) SNACS - NonOrganic	- / -	- / -	14 / 4.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 4.200
1.1.6) TYPE 28 MAST - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 43.008	Continuing	Continuing
Subtotal: Recurring	*- / 27.893*	*- / 19.092*	*- / 45.817*	*- / 42.452*	*- / -*	*- / 42.452*	*- / 53.433*	*- / 44.168*	*- / 45.050*	*- / 45.954*	*Continuing*	*Continuing*
Subtotal: PL025 LOW PROFILE IMAGING MAST	*3 / 27.893*	*2 / 19.092*	*24 / 45.817*	*10 / 42.452*	*- / -*	*10 / 42.452*	*11 / 53.433*	*10 / 44.168*	*10 / 45.050*	*10 / 45.954*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 27.893*	*- / 19.092*	*- / 45.817*	*- / 42.452*	*- / -*	*- / 42.452*	*- / 53.433*	*- / 44.168*	*- / 45.050*	*- / 45.954*	*Continuing*	*Continuing*
Support *(All Modification Items)*												
2.1) DEPOT SPECIAL TOOL/TEST EQUIPMENT	- / -	- / 10.540	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.540
2.2) MAST TESTING PLATFORM	- / -	- / 1.015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.015
2.3) TYPE 20 I-LEVEL SUPPORT	- / -	- / -	- / 5.879	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.879
Subtotal: Support	*- / 0.000*	*- / 11.555*	*- / 5.879*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 17.434*
Installation												
Modification Item 1 of 1: PL025 LOW PROFILE IMAGING MAST	- / 0.000	- / 0.198	- / 0.404	- / 1.412	- / 0.000	- / 1.412	- / 0.936	- / 1.168	- / 1.408	- / 1.212	- / 2.161	- / 8.899
Subtotal: Installation	*- / 0.000*	*- / 0.198*	*- / 0.404*	*- / 1.412*	*- / -*	*- / 1.412*	*- / 0.936*	*- / 1.168*	*- / 1.408*	*- / 1.212*	*- / 2.161*	*- / 8.899*
Total												
Total Cost (Procurement + Support + Installation)	**27.893**	**30.845**	**52.100**	**43.864**	**0.000**	**43.864**	**54.369**	**45.336**	**46.458**	**47.166**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 3 / PL025 LOW PROFILE IMAGING MAST

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL025 LOW PROFILE IMAGING MAST

Manufacturer Information

Manufacturer Name: L3 KEO | Manufacturer Location: Northhampton, MA

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Mar 2023					
Delivery Dates	Mar 2024	Mar 2025					

Manufacturer Name: TBD (TYPE 24 Competitive Procurement) | Manufacturer Location: TBD (Competitive Procurement)

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates			Mar 2024	Mar 2025	Mar 2026	Mar 2027	
Delivery Dates			Mar 2026	Mar 2027	Mar 2028	Mar 2029	

Manufacturer Name: TBD (MAST CAPABILITY ENHANCEMENT Competitive Procurement) | Manufacturer Location: TBD (Competitive Procurement)

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Mar 2023	Mar 2024	Mar 2025	Mar 2026	Mar 2027	Mar 2028
Delivery Dates		Mar 2024	Mar 2025	Mar 2026	Mar 2027	Mar 2028	Mar 2029

Manufacturer Name: TBD (SNACS Competitive Procurement) | Manufacturer Location: TBD (Competitive Procurement)

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Mar 2023					
Delivery Dates		Mar 2024					

Manufacturer Name: TBD (TYPE 28 Competitive Procurement) | Manufacturer Location: TBD (Competitive Procurement)

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							Mar 2028
Delivery Dates							Mar 2030

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 3 / PL025 LOW PROFILE IMAGING MAST

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL025 LOW PROFILE IMAGING MAST

Installation Information

Method of Implementation: AIT:: Installation Name: TYPE 20 MAST

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	1 / 0.198	2 / 0.404	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.602
FY 2022	- / -	- / -	- / -	2 / 0.412	0 / 0.000	2 / 0.412	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.412
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.630	- / -	- / -	- / -	0 / 0.000	3 / 0.630
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	1 / 0.198	2 / 0.404	2 / 0.412	0 / 0.000	2 / 0.412	3 / 0.630	- / -	- / -	- / -	0 / 0.000	8 / 1.644

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	1	-	-	-	1	1	-	-	1	1	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	-	-	1	-	-	-	1	1	-	-	1	1	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Method of Implementation: [none specified]:: Installation Name: MAST CAPABILITY ENHANCEMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	6 / 0.300	0 / 0.000	6 / 0.300	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.300
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.306	- / -	- / -	- / -	0 / 0.000	6 / 0.306
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.312	- / -	- / -	0 / 0.000	6 / 0.312
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.318	- / -	0 / 0.000	6 / 0.318
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.324	0 / 0.000	6 / 0.324
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.331	6 / 0.331

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 3 / PL025 LOW PROFILE IMAGING MAST

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL025 LOW PROFILE IMAGING MAST

Installation Information

Method of Implementation: [none specified]:: Installation Name: MAST CAPABILITY ENHANCEMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	6 / 0.300	0 / 0.000	6 / 0.300	6 / 0.306	6 / 0.312	6 / 0.318	6 / 0.324	6 / 0.331	36 / 1.891

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	6	36
Out	-	-	-	-	-	-	-	-	-	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	6	36

Method of Implementation: AIT:: Installation Name: TYPE 24 MAST

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.856	- / -	- / -	0 / 0.000	4 / 0.856
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.090	- / -	0 / 0.000	5 / 1.090
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.888	0 / 0.000	4 / 0.888
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.906	4 / 0.906
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.856	5 / 1.090	4 / 0.888	4 / 0.906	17 / 3.740

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 3 / PL025 LOW PROFILE IMAGING MAST

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL025 LOW PROFILE IMAGING MAST

Installation Information

Method of Implementation: AIT:: Installation Name: TYPE 24 MAST

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	2	2	1	-	2	1	1	4	17
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	2	2	1	-	2	1	1	4	17

Method of Implementation: [none specified]:: Installation Name: SNACS

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	14 / 0.700	0 / 0.000	14 / 0.700	- / -	- / -	- / -	- / -	0 / 0.000	14 / 0.700
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	14 / 0.700	0 / 0.000	14 / 0.700	- / -	- / -	- / -	- / -	0 / 0.000	14 / 0.700

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	-	5	5	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Out	-	-	-	-	-	-	-	-	-	-	5	5	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 3 / PL025 LOW PROFILE IMAGING MAST

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PL025 LOW PROFILE IMAGING MAST

Installation Information

Method of Implementation: AIT:: Installation Name: TYPE 28 MAST

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.924	4 / 0.924
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.924	4 / 0.924

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4

Method of Implementation (Organic): TYPE 20 CCM - Not Installed

Installation Quantity: 1

Footnotes:

(4) Mast Capability Enhancement (MCE) back-fits legacy photonics masts to provide advanced sensitive technologies for tactical operations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 4 / ML007 CADF (SWFTS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	4.784	20.020	21.960	0.000	21.960	21.880	22.848	23.304	23.768	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	4.784	20.020	21.960	0.000	21.960	21.880	22.848	23.304	23.768	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**4.784**	**20.020**	**21.960**	**0.000**	**21.960**	**21.880**	**22.848**	**23.304**	**23.768**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides advanced low-band Direction Finding (DF) capability compatible with the AN/BLQ-10 EW system. The ICADF system is experiencing increasing failures and obsolescence issues shown in Operation Availability and Reliability, Maintainability, Availability analyses. Beginning in FY22 with TI-22, the ICADF system will be replaced by a new CADF solution integrated with the AN/BLQ-10 system. This new CADF solution uses server-based technology to replace obsolete and unsupportable analog systems. This upgrade is part of the drive to digitize the submarine EW systems which allows these systems to be upgraded more rapidly and cheaply through software solutions. This cost code incorporates the CADF equipment with the AN/BLQ-10 equipment in ML012. Therefore, CADF is a part of the SWFTS TI shipset and must be procured and installed in like quantities (except EW SSBN (OHIO) Class) across all PARMs to maintain the SWFTS model. EW does not do upgrades on SSBN (OHIO) Class ships. This is the only SWFTS subsystem that does not participate in SSBN TI/APB upgrades.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 4 / ML007 CADF (SWFTS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CADF	**Modification Type:** SHIPALT	**Related RDT&E PEs:** 0604503N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ML007 CADF (SWFTS)												
B Kits												
Recurring												
1.1.1) CADF - NonOrganic	- / -	2 / 4.784	8 / 19.520	8 / 19.920	- / -	8 / 19.920	8 / 20.320	8 / 20.728	8 / 21.144	8 / 21.568	Continuing	Continuing
Subtotal: Recurring	*- / 0.000*	*- / 4.784*	*- / 19.520*	*- / 19.920*	*- / -*	*- / 19.920*	*- / 20.320*	*- / 20.728*	*- / 21.144*	*- / 21.568*	*Continuing*	*Continuing*
Subtotal: ML007 CADF (SWFTS)	*- / -*	*2 / 4.784*	*8 / 19.520*	*8 / 19.920*	*- / -*	*8 / 19.920*	*8 / 20.320*	*8 / 20.728*	*8 / 21.144*	*8 / 21.568*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 4.784*	*- / 19.520*	*- / 19.920*	*- / -*	*- / 19.920*	*- / 20.320*	*- / 20.728*	*- / 21.144*	*- / 21.568*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 1: ML007 CADF (SWFTS)	- / 0.000	- / 0.000	- / 0.500	- / 2.040	- / 0.000	- / 2.040	- / 1.560	- / 2.120	- / 2.160	- / 2.200	- / 2.810	- / 13.390
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 0.500*	*- / 2.040*	*- / -*	*- / 2.040*	*- / 1.560*	*- / 2.120*	*- / 2.160*	*- / 2.200*	*- / 2.810*	*- / 13.390*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**4.784**	**20.020**	**21.960**	**0.000**	**21.960**	**21.880**	**22.848**	**23.304**	**23.768**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 4 / ML007 CADF (SWFTS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: ML007 CADF (SWFTS)

Manufacturer Information

Manufacturer Name: Lockheed Martin [5]	Manufacturer Location: Syracuse, NY
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Mar 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	Jan 2028
Delivery Dates	Mar 2023	Mar 2024	Jul 2025	Jul 2026	Jul 2027	Jul 2028	Jul 2029

Installation Information

Method of Implementation: AIT:: Installation Name: CADF

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	2 / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.500
FY 2023	- / -	- / -	- / -	8 / 2.040	0 / 0.000	8 / 2.040	- / -	- / -	- / -	- / -	0 / 0.000	8 / 2.040
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.560	2 / 0.530	- / -	- / -	0 / 0.000	8 / 2.090
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.590	2 / 0.540	- / -	0 / 0.000	8 / 2.130
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.620	2 / 0.550	0 / 0.000	8 / 2.170
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.650	2 / 0.562	8 / 2.212
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 2.248	8 / 2.248
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	2 / 0.500	8 / 2.040	0 / 0.000	8 / 2.040	6 / 1.560	8 / 2.120	8 / 2.160	8 / 2.200	10 / 2.810	50 / 13.390

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	1	1	-	-	3	3	2	-	-	-	6	2	-	-	6	2	-	-	6	2	-	-	6	10	50
Out	-	-	-	-	-	-	1	1	-	-	3	3	2	-	-	-	6	2	-	-	6	2	-	-	6	2	-	-	6	10	50

Footnotes:

[5] Starting in FY24, shorten Administrative Leadtime by two months and increase Production Leadtime by six months to address long lead material and supply chain issues.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 5 / ML009- EWTU (formerly named EWTT)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	22.034	12.230	0.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	35.052
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	22.034	12.230	0.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	35.052
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**22.034**	**12.230**	**0.788**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**35.052**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures and refurbishes the Electronic Warfare Tactical Upgrade (EWTU) filling the gap in Communications Acquisition and Direction Finding (CADF) capability on TI-16 VA Class BLK IV submarines necessary to meet EW Capability Development Document (CDD) requirements. A gap was created when the CADF production line closed at the end of VA BLK III production and the subsequent cancellation of TI-16/18 NGA contracts, which would have replaced ICADF. This system is required to meet the EW CDD 907-97-16 dtd 27 September 2016. The EWTU is a Fleet directed system designed to accelerate newer technology integration and capabilities into VA Class submarines prior to AN/BLQ-10 server based CADF upgrades represented in ML007 of this budget line item. These systems are targeted for installation on BLK IV VA Class boats which will not be upgraded to AN/BLQ-10 server based CADF until mid to late 2020's. Installation of the EWTU mitigates the BLK IV VA Class' exposure to rapidly changing threats by providing the ability to detect threat signals and other signals of interest.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 5 / ML009- EWTU (formerly named EWTT)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Models of Systems Affected: EWTU **Modification Type:** OPALT **Related RDT&E PEs:** 0604503N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ML009- EWTU (formerly named EWTT)												
A Kits												
Recurring												
1.1.1) EWTU - NonOrganic	4 / 21.278	2 / 10.958	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 32.236
Subtotal: Recurring	*- / 21.278*	*- / 10.958*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 32.236*
Subtotal: ML009- EWTU (formerly named EWTT)	*4 / 21.278*	*2 / 10.958*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*6 / 32.236*
Subtotal: Procurement, All Modification Items	*- / 21.278*	*- / 10.958*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 32.236*
Support *(All Modification Items)*												
2.1) RADIANT VALKERIE LITE (RVL)	- / -	- / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500
Subtotal: Support	*- / 0.000*	*- / 0.500*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.500*
Installation												
Modification Item 1 of 1: ML009- EWTU (formerly named EWTT)	- / 0.756	- / 0.772	- / 0.788	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.316
Subtotal: Installation	*- / 0.756*	*- / 0.772*	*- / 0.788*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.316*
Total												
Total Cost (Procurement + Support + Installation)	**22.034**	**12.230**	**0.788**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**35.052**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 5 / ML009- EWTU (formerly named EWTT)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ML009- EWTU (formerly named EWTT)

Manufacturer Information

Manufacturer Name: Progeny Systems | Manufacturer Location: Manassas , VA

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022						
Delivery Dates	Mar 2023						

Installation Information

Method of Implementation: OPALT:: Installation Name: EWTU

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 0.756	2 / 0.772	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.528
FY 2022	- / -	- / -	2 / 0.788	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.788
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 0.756	2 / 0.772	2 / 0.788	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 2.316

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Out	2	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 6 / ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	45.072	37.702	59.836	69.744	0.000	69.744	66.700	72.560	74.008	75.488	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	45.072	37.702	59.836	69.744	0.000	69.744	66.700	72.560	74.008	75.488	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**45.072**	**37.702**	**59.836**	**69.744**	**0.000**	**69.744**	**66.700**	**72.560**	**74.008**	**75.488**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures the AN/BLQ-10 EW system for installation on LOS ANGELES, SEAWOLF, and VIRGINIA Class submarines beginning with TI-20. AN/BLQ-10 achieves EW superiority through hardware and software updates to pace the threat and brings EW fully onto the SWFTS model. Tech insertion procures the hardware necessary to upgrade and back-fit EW systems. This system will be fully aligned with SWFTS with the exception of SSBN Class and provides capabilities required by the EW Capability Development Document (CDD). Starting with TI-20, the AN/BLQ-10 is a more complex design over previous system resulting in a higher unit cost. NRE costs have been broken out from shipset costs consistent with the other SWFTS subsystems (SSN Acoustic Equipment, SSN Combat Control Systems, and Imaging Systems) who use the SWFTS model. This line item aligns the AN/BLQ-10 equipment with the Submarine Warfare Federated Tactical System (SWFTS) PMS401 (BLI 2150) acoustic and PMS425 (BLI 5420) combat control upgrades, as well as Imaging equipment in PL010 and CADF equipment in ML007 of this budget line item. SWFTS TI shipsets must be procured and installed in like quantities (except EW SSBN (OHIO) Class) across all PARMs to maintain the SWFTS model. EW does not do upgrades on SSBN (OHIO) Class ships. This is the only SWFTS subsystem that does not participate in SSBN TI/APB upgrades.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 6 / ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: TECHNICAL INSERTION	**Modification Type:** SHIPALT	**Related RDT&E PEs:** 0604503N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)												
A Kits												
Recurring												
1.1.1) TI-20 VA Class - NonOrganic	7 / 43.020	2 / 12.572	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 55.592
1.1.2) TI-22 688/21 Class - NonOrganic	- / -	2 / 12.572	8 / 51.296	2 / 13.080	- / -	2 / 13.080	- / -	- / -	- / -	- / -	- / -	12 / 76.948
1.1.3) TI-24 VA Class - NonOrganic	- / -	- / -	- / -	6 / 39.240	- / -	6 / 39.240	8 / 53.368	4 / 27.216	- / -	- / -	- / -	18 / 119.824
1.1.4) TI-26 688/21 Class - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 27.216	4 / 27.760	2 / 14.158	Continuing	Continuing
1.1.5) TI-26 VA Class - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 27.760	3 / 21.237	Continuing	Continuing
1.1.6) TI-28 VA Class - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 21.237	Continuing	Continuing
Subtotal: Recurring	*- / 43.020*	*- / 25.144*	*- / 51.296*	*- / 52.320*	*- / -*	*- / 52.320*	*- / 53.368*	*- / 54.432*	*- / 55.520*	*- / 56.632*	*Continuing*	*Continuing*
Subtotal: ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)	*7 / 43.020*	*4 / 25.144*	*8 / 51.296*	*8 / 52.320*	*- / -*	*8 / 52.320*	*8 / 53.368*	*8 / 54.432*	*8 / 55.520*	*8 / 56.632*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 43.020*	*- / 25.144*	*- / 51.296*	*- / 52.320*	*- / -*	*- / 52.320*	*- / 53.368*	*- / 54.432*	*- / 55.520*	*- / 56.632*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 1: ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)	- / 2.052	- / 12.558	- / 8.540	- / 17.424	- / 0.000	- / 17.424	- / 13.332	- / 18.128	- / 18.488	- / 18.856	- / 24.040	- / 133.418
Subtotal: Installation	*- / 2.052*	*- / 12.558*	*- / 8.540*	*- / 17.424*	*- / -*	*- / 17.424*	*- / 13.332*	*- / 18.128*	*- / 18.488*	*- / 18.856*	*- / 24.040*	*- / 133.418*
Total												
Total Cost (Procurement + Support + Installation)	**45.072**	**37.702**	**59.836**	**69.744**	**0.000**	**69.744**	**66.700**	**72.560**	**74.008**	**75.488**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 6 / ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

Manufacturer Information

Manufacturer Name: Lockheed Martin (6) | Manufacturer Location: Syracuse, NY

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Mar 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027	Jan 2028
Delivery Dates	Mar 2023	Mar 2024	Jul 2025	Jul 2026	Jul 2027	Jul 2028	Jul 2029

Installation Information

Method of Implementation: AIT:: Installation Name: TI-20 VA Class

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 2.052	6 / 12.558	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 14.610
FY 2022	- / -	- / -	2 / 4.270	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.270
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 2.052	6 / 12.558	2 / 4.270	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	9 / 18.880

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	2	2	2	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Out	1	-	2	2	2	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 6 / ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

Installation Information

Method of Implementation: AIT:: Installation Name: TI-22 688/21 Class

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	2 / 4.270	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.270
FY 2023	- / -	- / -	- / -	8 / 17.424	0 / 0.000	8 / 17.424	- / -	- / -	- / -	- / -	0 / 0.000	8 / 17.424
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.444	- / -	- / -	- / -	0 / 0.000	2 / 4.444
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	2 / 4.270	8 / 17.424	0 / 0.000	8 / 17.424	2 / 4.444	- / -	- / -	- / -	0 / 0.000	12 / 26.138

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	1	1	-	-	3	3	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	-	-	-	-	-	-	1	1	-	-	3	3	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Method of Implementation: AIT:: Installation Name: TI-24 VA Class

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	4 / 8.888	2 / 4.532	- / -	- / -	0 / 0.000	6 / 13.420
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 13.596	2 / 4.622	- / -	0 / 0.000	8 / 18.218
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.622	2 / 4.714	0 / 0.000	4 / 9.336
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 6 / ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

Installation Information

Method of Implementation: AIT:: Installation Name: TI-24 VA Class

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	4 / 8.888	8 / 18.128	4 / 9.244	2 / 4.714	0 / 0.000	18 / 40.974

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	-	-	6	2	-	-	2	2	-	-	-	-	18
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	-	-	6	2	-	-	2	2	-	-	-	-	18

Method of Implementation: AIT:: Installation Name: TI-26 688/21 Class

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 9.244	- / -	0 / 0.000	4 / 9.244
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 9.428	0 / 0.000	4 / 9.428
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.808	2 / 4.808
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 9.244	4 / 9.428	2 / 4.808	10 / 23.480

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 6 / ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

Installation Information

Method of Implementation: AIT:: Installation Name: TI-26 688/21 Class

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	2	10
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	2	10

Method of Implementation: AIT:: Installation Name: TI-26 VA Class

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.714	2 / 4.808	4 / 9.522
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 7.212	3 / 7.212
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.714	5 / 12.020	7 / 16.734

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5	7
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5	7

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 6 / ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ML012 - AN/BLQ-10 TECHNICAL INSERTION (SWFTS)

Installation Information

Method of Implementation: AIT:: Installation Name: TI-28 VA Class

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 7.212	3 / 7.212
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 7.212	3 / 7.212

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3

Footnotes:

(6) Starting in FY24, shorten Administrative Leadtime by two months and increase Production Leadtime by six months to address long lead material and supply chain issues.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 7 / ML017 AN/BLQ-10 FIELD CHANGE KITS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	74.322	19.864	23.847	20.793	0.000	20.793	31.906	36.185	43.302	44.318	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	74.322	19.864	23.847	20.793	0.000	20.793	31.906	36.185	43.302	44.318	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**74.322**	**19.864**	**23.847**	**20.793**	**0.000**	**20.793**	**31.906**	**36.185**	**43.302**	**44.318**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures AN/BLQ-10 and subsystem Product Improvement Field Change Kits (FCK). One (1) set of AN/BLQ-10 FCKs is procured in each fiscal year that includes variable quantities and types, procured from a variety of vendors.

Procures MMM Payload Module antennas to support submarine Fleet required improved Unmanned Aerial System (UAS) communications and Electronic Warfare (EW) capability to meet emerging threats and provide new capabilities required by the Fleet.

Procures Electronic Surveillance Measures (ESM) Electronics Assembly (EEA) and Antenna Assembly (AA) to increase the Ao of current masts and improve the capabilities for future antennas and inboard systems.

Procures Submarine Tethered Expendable Buoy (STEB), a 3" Launcher deployed, expendable, free-floating buoy that will communicate with the submarine through a fiber-optic tether.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 7 / ML017 AN/BLQ-10 FIELD CHANGE KITS

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Models of Systems Affected: AN/BLQ-10 **Modification Type:** ORDALT **Related RDT&E PEs:** 0604503N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ML017 AN/BLQ-10 FIELD CHANGE KITS												
A Kits												
Recurring												
1.1.1) AN/BLQ-10 FCKs - NonOrganic (7)	10 / 55.868	1 / 11.515	1 / 11.745	1 / 11.980	- / -	1 / 11.980	1 / 12.220	1 / 12.464	1 / 12.713	1 / 12.967	Continuing	Continuing
1.1.2) MMM Payloads - NonOrganic	12 / 14.228	6 / 7.044	6 / 7.182	6 / 7.326	- / -	6 / 7.326	6 / 7.470	6 / 7.620	6 / 7.770	6 / 7.926	Continuing	Continuing
1.1.3) ESM Electronics Assembly (EEA) and Antenna Assembly (AA) - Organic	- / -	- / -	3 / 3.465	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.465
1.1.4) Submarine Tethered Expendable Buoy (STEB) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.990	4 / 6.100	8 / 12.448	8 / 12.696	Continuing	Continuing
Subtotal: Recurring	*- / 70.096*	*- / 18.559*	*- / 22.392*	*- / 19.306*	*- / - /*	*- / 19.306*	*- / 22.680*	*- / 26.184*	*- / 32.931*	*- / 33.589*	*Continuing*	*Continuing*
Subtotal: ML017 AN/BLQ-10 FIELD CHANGE KITS	*22 / 70.096*	*7 / 18.559*	*10 / 22.392*	*7 / 19.306*	*- / - /*	*7 / 19.306*	*9 / 22.680*	*11 / 26.184*	*15 / 32.931*	*15 / 33.589*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 70.096*	*- / 18.559*	*- / 22.392*	*- / 19.306*	*- / - /*	*- / 19.306*	*- / 22.680*	*- / 26.184*	*- / 32.931*	*- / 33.589*	*Continuing*	*Continuing*
Support *(All Modification Items)*												
2.1) STEB Support	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.707	- / 7.837	- / 7.538	- / 6.567	Continuing	Continuing
Subtotal: Support	*- / 0.000*	*- / - /*	*- / - /*	*- / - /*	*- / - /*	*- / - /*	*- / 7.707*	*- / 7.837*	*- / 7.538*	*- / 6.567*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 1: ML017 AN/BLQ-10 FIELD CHANGE KITS	- / 4.226	- / 1.305	- / 1.455	- / 1.487	- / 0.000	- / 1.487	- / 1.519	- / 2.164	- / 2.833	- / 4.162	- / 3.458	- / 22.609
Subtotal: Installation	*- / 4.226*	*- / 1.305*	*- / 1.455*	*- / 1.487*	*- / - /*	*- / 1.487*	*- / 1.519*	*- / 2.164*	*- / 2.833*	*- / 4.162*	*- / 3.458*	*- / 22.609*
Total												
Total Cost (Procurement + Support + Installation)	**74.322**	**19.864**	**23.847**	**20.793**	**0.000**	**20.793**	**31.906**	**36.185**	**43.302**	**44.318**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 7 / ML017 AN/BLQ-10 FIELD CHANGE KITS

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ML017 AN/BLQ-10 FIELD CHANGE KITS

Manufacturer Information

Manufacturer Name: Multiple Vendors — Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 3 — Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025	Dec 2026	Dec 2027
Delivery Dates	Jun 2022	Jun 2023	Jun 2024	Jun 2025	Jun 2026	Jun 2027	Jun 2028

Manufacturer Name: Seacorp (MMM Payloads) — Manufacturer Location: Newport, RI

Administrative Leadtime *(in Months)*: 6 — Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Mar 2023	Mar 2024	Mar 2025	Mar 2026	Mar 2027	Mar 2028
Delivery Dates	Mar 2023	Mar 2024	Mar 2025	Mar 2026	Mar 2027	Mar 2028	Mar 2029

Manufacturer Name: TBD Competitive (STEB) — Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 6 — Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates				Mar 2025	Mar 2026	Mar 2027	Mar 2028
Delivery Dates				Mar 2026	Mar 2027	Mar 2028	Mar 2029

Installation Information

Method of Implementation: AIT:: Installation Name: AN/BLQ-10 FCKs

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	10 / 3.384	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 3.384
FY 2022	- / -	1 / 0.685	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.685
FY 2023	- / -	- / -	1 / 0.699	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.699
FY 2024	- / -	- / -	- / -	1 / 0.713	0 / 0.000	1 / 0.713	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.713
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.727	- / -	- / -	- / -	0 / 0.000	1 / 0.727
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.742	- / -	- / -	0 / 0.000	1 / 0.742
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.757	- / -	0 / 0.000	1 / 0.757
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.772	0 / 0.000	1 / 0.772
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	10 / 3.384	1 / 0.685	1 / 0.699	1 / 0.713	0 / 0.000	1 / 0.713	1 / 0.727	1 / 0.742	1 / 0.757	1 / 0.772	0 / 0.000	17 / 8.479

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 7 / ML017 AN/BLQ-10 FIELD CHANGE KITS

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ML017 AN/BLQ-10 FIELD CHANGE KITS

Installation Information

Method of Implementation: AIT:: Installation Name: AN/BLQ-10 FCKs

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	10	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	17
Out	10	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	17

Method of Implementation: AIT:: Installation Name: MMM Payloads

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	7 / 0.842	5 / 0.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.462
FY 2022	- / -	- / -	6 / 0.756	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.756
FY 2023	- / -	- / -	- / -	6 / 0.774	0 / 0.000	6 / 0.774	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.774
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.792	- / -	- / -	- / -	0 / 0.000	6 / 0.792
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.810	- / -	- / -	0 / 0.000	6 / 0.810
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.828	- / -	0 / 0.000	6 / 0.828
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.846	0 / 0.000	6 / 0.846
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.863	6 / 0.863
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 0.842	5 / 0.620	6 / 0.756	6 / 0.774	0 / 0.000	6 / 0.774	6 / 0.792	6 / 0.810	6 / 0.828	6 / 0.846	6 / 0.863	54 / 7.131

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	7	-	2	2	1	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	6	54
Out	7	-	2	2	1	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	-	2	2	2	6	54

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog	**Modification Number / Title:** 7 / ML017 AN/BLQ-10 FIELD CHANGE KITS

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ML017 AN/BLQ-10 FIELD CHANGE KITS

Installation Information

Method of Implementation: AIT:: Installation Name: Submarine Tethered Expendable Buoy (STEB)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.612	- / -	- / -	0 / 0.000	2 / 0.612
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.248	- / -	0 / 0.000	4 / 1.248
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 2.544	0 / 0.000	8 / 2.544
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 2.595	8 / 2.595
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.612	4 / 1.248	8 / 2.544	8 / 2.595	22 / 6.999

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	2	-	-	3	3	2	8	22
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	2	-	-	3	3	2	8	22

Method of Implementation (Organic): ESM Electronics Assembly (EEA) and Antenna Assembly (AA) - Not Installed

Installation Quantity: 3

Footnotes:

(7) AN/BLQ-10 FCKs are procured in variable quantities and types, and are bought from a variety of vendors each fiscal year.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0900 / DDG Mod

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0204228N	**Other Related Program Elements:** 0604567N, 0604307N
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	4,159.012	535.667	744.341	628.532	0.000	628.532	927.280	855.780	942.398	958.412	9,631.876	19,383.298
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	4,159.012	535.667	744.341	628.532	0.000	628.532	927.280	855.780	942.398	958.412	9,631.876	19,383.298
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**4,159.012**	**535.667**	**744.341**	**628.532**	**0.000**	**628.532**	**927.280**	**855.780**	**942.398**	**958.412**	**9,631.876**	**19,383.298**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	4.028	4.119	13.422	-	13.422	6.131	5.289	5.317	4.749	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The DDG Modernization (DDGM) Program is required to upgrade the in-service Flight I, II, and IIA DDG-51 Class ships in order to keep the DDG Class relevant and operational. The DDGM Program is composed of a series of improvements in both the Hull, Mechanical, and Electrical (HM&E) and Combat Systems (CS). Modernization changes are aligned with New Construction design to increase commonality and harness Economic Order Quantities across both programs. DDGM upgrades are planned for each ship's mid-life availability. Hardware systems have a 2-year procurement lead-time, except for SPY-6 (DM014) which has a 3-year procurement lead time. Installation quantities starting in FY24 are as follows: HM&E - 3/3/2/2/0, CS - 3/3/2/2/0, SPY-6 - 0/0/1/1/2.

HM&E modernization is comprised of Commercial Off the Shelf (COTS) technologies for Ship Control and Engineering Plant Control Systems. New systems provide increased situational awareness, reduce manpower workloads, and address reliability and obsolescence challenges with legacy systems.

CS modernization upgrades the Aegis Weapon Systems (AWS). The upgrades enables the DDG-51 Class to conduct Ballistic Missile Defense simultaneously while conducting Air Defense within its assigned theatre. Upgrades allow for the use of Aegis Open Architecture (AOA) replacing legacy signal processors with a Multi-Mission Signal Processor (MMSP). CS modernization establishes the foundation for upgrading the DDG-51 Class from the SPY-1 radar array to the SPY-6 solid-state radar, enabling the DDG-51 Class to remaining tactically competitive against emerging threats.

DDGM Installation utilizes a Firm Fixed Price Contracting Strategy for both the East and West Coasts of the United States. Installation costs require three years of funding per ship for: Ship Checks (S/C) two years prior to install, Ship Installation Drawing (SID) development and Long Lead Time Material purchase one year prior to install, and physical installation for the year of install. Installation costs are budgeted based on the ship's homeport manday rates as promulgated by the Navy.

Initial Spares/OPN-8 Spares: Initial Spares/OPN-8 Spares funding is utilized to procure Installation & Checkout (INCO) and On-Board Repairs Parts (OBPR) Spares. INCO Spares are necessary to support power up and testing of modernization systems, and have Ready For Issue (RFI) equipment in the event of a failure. Without INCO spares any failure could result in a work stoppage and delay to availability completion. OBRP Spares are used to provide the ship sparing for post availability operations, and prevent system degradation if a failure occurs, while At-Sea.

[P40A / DM002 - LAND BASED ENGINEERING SITES]: Funds will be used to upgrade shore facilities for HM&E alterations providing risk reduction testing and provide for Combat System and HM&E training products.

Cost increases starting in FY24 support LBES facilities for testing and training for SPY-6 Modernization associated with DDGM 2.0 efforts.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0900 / DDG Mod	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0204228N	**Other Related Program Elements:** 0604567N, 0604307N
Line Item MDAP/MAIS Code: N/A		

[P40A / DM013 - CONJUNCTIVE ALTERATION DEFINITION AND INTEGRATION]: Procures Conjunctive Alteration Definition and Integration that includes equipment procurement, non-recurring and recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

[P40A / HELO HANGER DOOR (HHD)]: Helo Hanger Door (HHD)- FLTIIA ships have documented HHD reliability issues. This update installs several new reliability improvements that are planned for DDG113 AF.

[P40A / OFFICER OF THE DECK SCREEN (OOD)]: Officer Of The Deck Screen (OOD)- Replaces the Interior Communication/Standard Module alarm panels in the 3 OOD stations and Combat Systems Maintenance Center with Agimet Multi-Function Color Repeaters for standardization of BF components and commonality with DDG 105 AF design.

[P40A / AWS VIDEO DISTRIBUTION SYSTEM & CIRCUIT 3 TV]: This Ship Change replaces obsolete and unsupported legacy topside surveillance camera CKT-3TV Systems on NON-AMOD DDGs(including sensors, pan/tilt, unit, controllers and other HW) with shock and environmentally qualified COTS Camera System.

[P40A / DIGITAL VOLTAGE REGULATOR (DVR)]: Digital Voltage Regulator (DVR)- Replaces the obsolete legacy Excitation Control Panel (EXCOP) for each generator consistent with DDG 113AF.

[P40A / DM6IN - INSTALLATION]: Funds are for installation of Fleet Modernization Program alterations that are associated DDG Modernization alterations. HM&E centric availabilities cost ~$5M each, and Combined (HM&E/AMOD) availabilities cost ~$12M each. Alterations include Fuel Oil System Control upgrades, Lube Oil Purifier improvements, Digital Indicators modifications, Vertical Launch System (VLS) Magazine ventilation changes required to support SM-3 missiles and installation costs for Microwave Tubes (DM006) and BMD Cards (DM008) that enable the ship to perform Ballistic Missile Defense. Upgrades address obsolescence and reliability problems with existing systems, improving operational availability and Total Ownership Cost.

[P40A / AEGIS MODERNIZATION TESTING (AMT)]: Provide on-site engineering and technical support for Aegis Modernization. AMT teams support AEGIS-system Light Off (ALO), Combat System verification and alignment, along with crew training for operations and maintenance of new Aegis Combat System. AMT is budgeted in two parts: Planning and execution.

In FY24, AMT teams will be executing 3 availabilities (DDG 90, 93, 94) and planning for 3 availabilities (DDG 92, 95, 97).

[P40A / COMBAT SYSTEM SHIP QUALIFICATION TRIALS (CSSQT)]: CSSQT evolutions provide an opportunity for a life-fire test and validation of the new Combat System suite to ensure the system performs as expected and will employ weapons as expected in a tactical environment. It additionally provides real world training for the ships crew and combat watch standers. CSSQT is required by Navy policy when major modifications are made to the Combat System suite to ensure the CS kill chain functions properly and can support national tasking. CSSQT is budgeted in two parts: 1) Planning (~$1.5M), 2) Execution: Consists of ranges costs, flight services, data recording and analysis of live fire events (~$8M).

In FY24, CSSQT costs include planning for three ships ($5M) and execution of three ships ($26M).

[P40A / DM012 - CEC]: Procures Cooperative Engagement Capability (CEC) combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships. Flight IIA DDGs have previously received CEC installation.

[P40A / MOBILE SEAMANSHIP AND NAVIGATION TRAINER CONGRESSIONAL ADD]: Mobile Seamanship & Navigation Trainer: Funding supports Item #36 of the Comprehensive Review (CR 36) and established the Mariners Skills Training Program (MSTP), which will deliver courses for individual watchstanding on shiphandling, Radar Navigation an Voyage Management. The $2.5M of PMS 407 funding aided in the procurement of the Surface Navigation, Seamanship, and Shiphandling Trainer (I-NSST) for Everett. It also provided Conning Officer Virtual Environment (COVE) TRANET capabilities to Mariner Skills Training Center classrooms. Addresses the concerns identified in CR 36 to avoid additional collisions, loss of life and millions of dollars in damage to Naval warships.

[P3A / DM001 - DDG MODERNIZATION HME (GEDMS)]: Gigabit Ethernet Data Multiplexing System (GEDMS) replaces the obsolete copper machinery control LAN infrastructure with a new system based on the widely used Ethernet industry standard.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0900 / DDG Mod	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0204228N	**Other Related Program Elements:** 0604567N, 0604307N
Line Item MDAP/MAIS Code: N/A		

[P3A - 2 / DM001 - DDG MODERNIZATION HME (MCS/DCS)]: Machinery Control System (MCS) replaces the obsolete control consoles while also delivering enhanced capability to the fleet through improved situational awareness and reconfigurable user stations. The new consoles use Commercial Off The Shelf (COTS)-based computers which connect via Versa Modular Eurocard (VME)-chassis technology. The VME architecture is expected to be supportable for the remaining service life of the ship and will enable computer upgrades within the chassis thereby mitigating future obsolescence concerns.

[P3A - 3 / DM001 - DDG MODERNIZATION HME (DVSS)]: Digital Video Surveillance System (DVSS) is a network of video cameras which are integrated into the Machinery Control system. This system is primarily a watch-stander situational awareness tool which supplements the workload reduction benefits of the new MCS.

[P3A - 4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)]: Shipwide Interior Wireless Communication System (SIWCS) - provides point-to-point coverage throughout the internal spaces of the ship as well as topside, topside-to-interior, line of sight ship-to-ship & line of sight ship-to-shore communications capabilities.

[P3A - 5 / DM001 - DDG MODERNIZATION HME (IBNS)]: The Integrated Bridge & Navigation System (IBNS) replaces obsolete bridge consoles and introduces flexibility with how the pilot house is managed during navigation. The key benefit is the ability for operating with fewer watch-standers, reduced watch standard workloads, and improved safety of navigation.

[P3A - 6 / DM001 - HES-C]: High Efficiency Super Capacity (HES-C) Chiller Provides modernization to 50 year old Air Conditioning and Refrigeration (AC&R) systems installed on the DDG-51 Class. HES-C provides existing 200-ton AC&R systems, with an additional 125-tons of capacity by changing from a single-stage to a two stage chiller. It also reduces the amount of mechanical complexity making it lighter, more efficient and improving operational availability.

This upgrade would be conducted on all five AC&R systems on DDG-91 and following. This additional capacity is required to be installed conjunctively with SPY-6 (DM014) to deliver enough cooling capacity for the Aegis Weapon System. HES-C has a two year production lead time.

[P3A - 7 / DM003 - MK 160 MOD 15 GWS]: Procures MK 160 Mod 15 Gun Weapon System (GWS) that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

[P3A - 8 / DM004 - AWS UPGRADE]: Procures equipment for the Aegis Weapon System (AWS) Upgrades that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

[P3A - 9 / DM005 - MULTI-MISSION SIGPRO]: Procures Multi-Mission SIGPRO combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

[P3A - 10 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES]: Procures Multi-Mission Solid State Amplifier (SSA)/Continuous Wave Illumination (CWI) Microwave Tubes upgrades for DDG Modernization Program that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

[P3A - 11 / DM008 - MULTI-MISSION BMD CAPABILITY]: Procures Multi-Mission Ballistic Missile Defense (BMD) Capability combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

[P3A - 12 / DM009 - VLS UPGRADES]: Procures Vertical Launch System (VLS) Modifications, Evolved Sea Sparrow Missile VLS Modifications, SM3 Operability Heating Ventilation Air Conditioning (HVAC) and VLS MODS for SM3 Block 3 combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

[P3A - 13 / DM011 - AN/SQQ-89 A(V15)]: Procures improved AN/SQQ-89(V)15 with Multi-Function Towed Array (MFTA) combat systems to replace the installed MIL-STD AN/SQQ-89(V) that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0900 / DDG Mod	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0204228N	**Other Related Program Elements:** 0604567N, 0604307N
Line Item MDAP/MAIS Code: N/A		

[P3A - 19 / DM014 SOLID STATE RADAR EQUIPMENT]: SPY-6 solid-state radar will provide the latest capability to the DDG-51 Class for Air Defense and Ballistic Missile Defense. SPY-6 will be applicable to DDG 91 to 124 & 127 by replacing legacy SPY-1 radar arrays with SPY-6 arrays to deliver AEGIS Baseline 10. Baseline 10 will build upon Baseline 9 hardware and software design. SPY-6 fielding plans are integrated with SEWIP BLK III (BLI 2312) in order to rapidly deliver enhanced capability to the DDG-51 Class required to pace new threats by international competitors.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0900 / DDG Mod

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** 0204228N | **Other Related Program Elements:** 0604567N, 0604307N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	DDG Mod				- / 772.539	- / 121.245	- / 131.860	- / 105.722	- / -	- / 105.722
P-3a	1 / DM001 - DDG MODERNIZATION HME (GEDMS) (TBD)				- / 355.172	- / 29.767	- / 28.257	- / 25.653	- / 0.000	- / 25.653
P-3a	2 / DM001 - DDG MODERNIZATION HME (MCS/DCS) (TBD)				- / 634.364	- / 62.842	- / 57.824	- / 52.020	- / 0.000	- / 52.020
P-3a	3 / DM001 - DDG MODERNIZATION HME (DVSS) (TBD)				- / 53.567	- / 6.259	- / 5.466	- / 4.019	- / 0.000	- / 4.019
P-3a	4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS) (TBD)				- / 22.226	- / 1.042	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / DM001 - DDG MODERNIZATION HME (IBNS) (TBD)				- / 274.181	- / 25.640	- / 23.087	- / 16.331	- / 0.000	- / 16.331
P-3a	6 / DM001 - HES-C (TBD)				- / 0.000	- / 0.000	- / 8.531	- / 33.866	- / 0.000	- / 33.866
P-3a	7 / DM003 - MK 160 MOD 15 GWS (TBD)				- / 116.644	- / 16.239	- / 17.487	- / 10.264	- / 0.000	- / 10.264
P-3a	8 / DM004 - AWS UPGRADE (TBD)				- / 862.789	- / 122.557	- / 143.829	- / 103.845	- / 0.000	- / 103.845
P-3a	9 / DM005 - MULTI-MISSION SIGPRO (TBD)				- / 458.446	- / 64.433	- / 68.994	- / 33.910	- / 0.000	- / 33.910
P-3a	10 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES (TBD)				- / 23.985	- / 3.436	- / 3.498	- / 1.187	- / 0.000	- / 1.187
P-3a	11 / DM008 - MULTI-MISSION BMD CAPABILITY (TBD)				- / 40.466	- / 5.710	- / 5.813	- / 1.973	- / 0.000	- / 1.973
P-3a	12 / DM009 - VLS UPGRADES (TBD)				- / 204.817	- / 27.522	- / 29.456	- / 18.147	- / 0.000	- / 18.147
P-3a	13 / DM011 - AN/SQQ-89 A(V15) (TBD)				- / 174.437	- / 5.352	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	14 / DM013 - (1 MC/DIAS UPGRADE) (TBD)				- / 49.611	- / 11.008	- / 10.213	- / 9.801	- / 0.000	- / 9.801
P-3a	15 / DM013 - (MORIAH WIND SYSTEM) (TBD)				- / 21.139	- / 5.693	- / 4.045	- / 3.193	- / 0.000	- / 3.193
P-3a	16 / DM013 - (IVCS UPGRADE) (TBD)				- / 78.415	- / 21.967	- / 27.488	- / 22.119	- / 0.000	- / 22.119
P-3a	17 / DM013 - Slewing Arm Davit (SLAD) (TBD)				- / 9.251	- / 2.764	- / 2.802	- / 1.491	- / 0.000	- / 1.491
P-3a	18 / DM013 - AN/SPA-25H (TBD)				- / 6.963	- / 2.191	- / 2.171	- / 1.855	- / 0.000	- / 1.855
P-3a	19 / DM014 SOLID STATE RADAR EQUIPMENT (TBD)				- / 0.000	- / 0.000	- / 173.520	- / 183.136	- / 0.000	- / 183.136
P-40	**Total Gross/Weapon System Cost**				**- / 4,159.012**	**- / 535.667**	**- / 744.341**	**- / 628.532**	**- / 0.000**	**- / 628.532**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	DDG Mod				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / DM001 - DDG MODERNIZATION HME (GEDMS) (TBD)				- / 28.278	- / 23.835	- / 19.030	- / 13.387	- / 77.315	- / 600.694
P-3a	2 / DM001 - DDG MODERNIZATION HME (MCS/DCS) (TBD)				- / 58.928	- / 46.585	- / 41.474	- / 32.326	- / 186.287	- / 1,172.650
P-3a	3 / DM001 - DDG MODERNIZATION HME (DVSS) (TBD)				- / 4.864	- / 3.335	- / 3.181	- / 1.919	- / 126.665	- / 209.275
P-3a	4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS) (TBD)				- / 0.478	- / 0.640	- / 0.000	- / 0.000	- / 0.000	- / 24.386
P-3a	5 / DM001 - DDG MODERNIZATION HME (IBNS) (TBD)				- / 20.632	- / 11.969	- / 14.849	- / 12.956	- / 104.334	- / 503.979
P-3a	6 / DM001 - HES-C (TBD)				- / 37.344	- / 71.874	- / 76.920	- / 87.029	- / 1,178.770	- / 1,494.334
P-3a	7 / DM003 - MK 160 MOD 15 GWS (TBD)				- / 14.015	- / 5.615	- / 12.836	- / 11.794	- / 97.708	- / 302.602

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0900 / DDG Mod

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204228N	Other Related Program Elements: 0604567N, 0604307N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	8 / DM004 - AWS UPGRADE (TBD)				- / 122.570	- / 59.438	- / 94.216	- / 66.968	- / 161.355	- / 1,737.567
P-3a	9 / DM005 - MULTI-MISSION SIGPRO (TBD)				- / 52.483	- / 12.274	- / 6.484	- / 0.000	- / 0.000	- / 697.024
P-3a	10 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES (TBD)				- / 2.416	- / 0.000	- / 0.000	- / 0.000	- / 12.520	- / 47.042
P-3a	11 / DM008 - MULTI-MISSION BMD CAPABILITY (TBD)				- / 4.016	- / 0.000	- / 4.162	- / 4.237	- / 20.810	- / 87.187
P-3a	12 / DM009 - VLS UPGRADES (TBD)				- / 24.219	- / 10.646	- / 22.450	- / 20.741	- / 158.332	- / 516.330
P-3a	13 / DM011 - AN/SQQ-89 A(V15) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 179.789
P-3a	14 / DM013 - (1 MC/DIAS UPGRADE) (TBD)				- / 10.390	- / 9.319	- / 5.942	- / 3.016	- / 80.376	- / 189.676
P-3a	15 / DM013 - (MORIAH WIND SYSTEM) (TBD)				- / 2.447	- / 1.167	- / 0.430	- / 0.750	- / 366.379	- / 405.243
P-3a	16 / DM013 - (IVCS UPGRADE) (TBD)				- / 24.352	- / 13.559	- / 17.244	- / 10.529	- / 86.214	- / 301.887
P-3a	17 / DM013 - Slewing Arm Davit (SLAD) (TBD)				- / 2.175	- / 0.571	- / 1.933	- / 1.595	- / 98.723	- / 121.305
P-3a	18 / DM013 - AN/SPA-25H (TBD)				- / 1.692	- / 1.134	- / 0.660	- / 1.632	- / 45.137	- / 63.435
P-3a	19 / DM014 SOLID STATE RADAR EQUIPMENT (TBD)				- / 379.109	- / 441.716	- / 502.114	- / 565.997	- / 6,774.118	- / 9,019.710
P-40	**Total Gross/Weapon System Cost**				**- / 927.280**	**- / 855.780**	**- / 942.398**	**- / 958.412**	**- / 9,631.876**	**- / 19,383.298**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Aggregated Items Title: DDG Mod

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years Unit Cost ($)	Prior Years Qty (Each)	Prior Years Total Cost ($ M)	FY 2022 Unit Cost ($)	FY 2022 Qty (Each)	FY 2022 Total Cost ($ M)	FY 2023 Unit Cost ($)	FY 2023 Qty (Each)	FY 2023 Total Cost ($ M)	FY 2024 Base Unit Cost ($)	FY 2024 Base Qty (Each)	FY 2024 Base Total Cost ($ M)	FY 2024 OCO Unit Cost ($)	FY 2024 OCO Qty (Each)	FY 2024 OCO Total Cost ($ M)	FY 2024 Total Unit Cost ($)	FY 2024 Total Qty (Each)	FY 2024 Total Total Cost ($ M)
1) DM002 - LAND BASED ENGINEERING SITES																				
1.1) DM002 - Land Based Engineering Sites (1)	A		-	-	224.305	-	-	19.818	-	-	8.634	-	-	10.624	-	-	-	-	-	10.624
Subtotal: 1) DM002 - LAND BASED ENGINEERING SITES			**-**	**-**	***224.305***	**-**	**-**	***19.818***	**-**	**-**	***8.634***	**-**	**-**	***10.624***	**-**	**-**	**-**	**-**	**-**	***10.624***
2) DM013 - CONJUNCTIVE ALTERATION DEFINITION AND INTEGRATION																				
2.1) DM013 - CONJUNCTIVE ALTERATION DEFINITION AND INTEGRATION	A		-	-	110.305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) DM013 - CONJUNCTIVE ALTERATION DEFINITION AND INTEGRATION			**-**	**-**	***110.305***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) HELO HANGER DOOR (HHD)																				
3.1) HELO HANGER DOOR (HHD) EQUIPMENT	A		1,895K	8	15.160	1,956K	3	5.868	1,991K	3	5.973	2,027K	1	2.027	-	-	-	2,027K	1	2.027
Subtotal: 3) HELO HANGER DOOR (HHD)			**-**	**-**	***15.160***	**-**	**-**	***5.868***	**-**	**-**	***5.973***	**-**	**-**	***2.027***	**-**	**-**	**-**	**-**	**-**	***2.027***
4) OFFICER OF THE DECK SCREEN (OOD)																				
4.1) OFFICER OF THE DECK SCREEN (OOD) EQUIPMENT	A		148,750.00	8	1.190	153,666.67	3	0.461	156,333.33	3	0.469	159,000.00	1	0.159	-	-	-	159,000.00	1	0.159
Subtotal: 4) OFFICER OF THE DECK SCREEN (OOD)			**-**	**-**	***1.190***	**-**	**-**	***0.461***	**-**	**-**	***0.469***	**-**	**-**	***0.159***	**-**	**-**	**-**	**-**	**-**	***0.159***
5) AWS VIDEO DISTRIBUTION SYSTEM & CIRCUIT 3 TV																				
5.1) AWS VDS & CK3TV EQUIPMENT	A		705,000.00	3	2.115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) AWS VIDEO DISTRIBUTION SYSTEM & CIRCUIT 3 TV			**-**	**-**	***2.115***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
6) DIGITAL VOLTAGE REGULATOR (DVR)																				
6.1) DIGITAL VOLTAGE REGULATOR EQUIPMENT	A		1,411K	11	15.525	1,460K	3	4.381	1,486K	3	4.459	1,513K	1	1.513	-	-	-	1,513K	1	1.513
6.2) CONJUNCTIVE ALTERATION ENGINEERING	A		-	-	1.701	-	-	0.588	-	-	0.598	-	-	0.609	-	-	-	-	-	0.609
Subtotal: 6) DIGITAL VOLTAGE REGULATOR (DVR)			**-**	**-**	***17.226***	**-**	**-**	***4.969***	**-**	**-**	***5.057***	**-**	**-**	***2.122***	**-**	**-**	**-**	**-**	**-**	***2.122***
7) DMCA1 - DDG-51 MODERNIZATION PROGRAM CONGRESSIONAL ADD																				

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Aggregated Items Title: DDG Mod

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
7.1) DMCA1 - DDG-51 MODERNIZATION	A		-	-	5.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.2) SQQ-89A (V) W/ MFTA	A		-	-	25.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) DMCA1 - DDG-51 MODERNIZATION PROGRAM CONGRESSIONAL ADD			**-**	**-**	***30.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
8) DMCA3 - COMMUNICATIONS UPGRADE FOR DDG MOD CONGRESSIONAL ADD																				
8.1) DMCA3 - COMMUNICATIONS UPGRADE	A		-	-	3.120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 8) DMCA3 - COMMUNICATIONS UPGRADE FOR DDG MOD CONGRESSIONAL ADD			**-**	**-**	***3.120***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
9) DMCA4 - SMART VALVE AUTOMATIC FIRE SUPPRESSION SYSTEM CONGRESSIONAL ADD																				
9.1) SMART VALVE EQUIPMENT	A		-	-	2.480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 9) DMCA4 - SMART VALVE AUTOMATIC FIRE SUPPRESSION SYSTEM CONGRESSIONAL ADD			**-**	**-**	***2.480***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
10) DSA FOR FY14 AVAILABILITY																				
10.1) DSA FOR FY14 AVAILABILITY	A		-	-	39.067	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 10) DSA FOR FY14 AVAILABILITY			**-**	**-**	***39.067***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
11) DM6IN - INSTALLATION																				
11.1) DM6IN - INSTALLATIONS	A		-	-	39.641	-	-	43.811	-	-	46.409	-	-	24.166	-	-	-	-	-	24.166
Subtotal: 11) DM6IN - INSTALLATION			**-**	**-**	***39.641***	**-**	**-**	***43.811***	**-**	**-**	***46.409***	**-**	**-**	***24.166***	**-**	**-**	**-**	**-**	**-**	***24.166***
12) MRG Procurement																				
12.1) MRG Equipment	A		15,000K	1	15.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 12) MRG Procurement			**-**	**-**	***15.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
13) AEGIS MODERNIZATION TESTING (AMT)																				
13.1) AEGIS MODERNIZATION TESTING (AMT)	A		-	-	55.158	-	-	25.746	-	-	33.862	-	-	34.539	-	-	-	-	-	34.539
Subtotal: 13) AEGIS MODERNIZATION TESTING (AMT)			**-**	**-**	***55.158***	**-**	**-**	***25.746***	**-**	**-**	***33.862***	**-**	**-**	***34.539***	**-**	**-**	**-**	**-**	**-**	***34.539***
14) COMBAT SYSTEM SHIP QUALIFICATION TRIALS (CSSQT)																				
14.1) COMBAT SYSTEM SHIP QUALIFICATION TRIALS (CSSQT)	A		-	-	46.277	-	-	20.572	-	-	31.456	-	-	32.085	-	-	-	-	-	32.085

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Aggregated Items Title: DDG Mod

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Subtotal: 14) COMBAT SYSTEM SHIP QUALIFICATION TRIALS (CSSQT)			**-**	**-**	***46.277***	**-**	**-**	***20.572***	**-**	**-**	***31.456***	**-**	**-**	***32.085***	**-**	**-**	**-**	**-**	**-**	***32.085***
15) DMCA5-BROMINE-FREE WATER PURIFICATION SYSTEM CONGRESSIONAL ADD																				
15.1) DMCA5-BROMINE-FREE WATER PURIFICATION SYSTEM (2)	A		-	-	3.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 15) DMCA5-BROMINE-FREE WATER PURIFICATION SYSTEM CONGRESSIONAL ADD			**-**	**-**	***3.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
16) DM010 - FCS STAMO																				
16.1) FCS STAMO EQUIPMENT	A		14,843K	1	14.843	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 16) DM010 - FCS STAMO			**-**	**-**	***14.843***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
17) DM012 - CEC (3)																				
17.1) CEC EQUIPMENT	A		-	-	42.143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 17) DM012 - CEC			**-**	**-**	***42.143***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
18) TRAINING AND MAINTENANCE SUPPORT SYSTEM CONGRESSIONAL ADD																				
18.1) TRAINING AND MAINTENANCE SUPPORT SYSTEM	A		-	-	9.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 18) TRAINING AND MAINTENANCE SUPPORT SYSTEM CONGRESSIONAL ADD			**-**	**-**	***9.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
19) WATER PURIFICATION SYSTEMS CONGRESSIONAL ADD																				
19.1) WATER PURIFICATION SYSTEMS	A		-	-	5.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 19) WATER PURIFICATION SYSTEMS CONGRESSIONAL ADD			**-**	**-**	***5.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
20) MOBILE SEAMANSHIP AND NAVIGATION TRAINER CONGRESSIONAL ADD																				
20.1) MOBILE SEAMANSHIP AND NAVIGATION TRAINER	A		-	-	2.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 20) MOBILE SEAMANSHIP AND NAVIGATION TRAINER CONGRESSIONAL ADD			**-**	**-**	***2.500***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
21) DM007 - SPY-1D TRANSMITTER UPGRADES																				
21.1) SPY-1D TRANSMITTER UPGRADES	A		-	-	95.009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Aggregated Items Title:** DDG Mod

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Subtotal: 21) DM007 - SPY-1D TRANSMITTER UPGRADES			-	-	***95.009***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	**772.539**	-	-	**121.245**	-	-	**131.860**	-	-	**105.722**	-	-	-	-	-	**105.722**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) Funds are used to upgrade shore facilities utilized for pre-installation testing and crew training of HM&E and Combat Systems alterations.

(2) Congressional Add for-Bromine-free Water Purification Systems. Until recently, most onboard ship water purification systems used bromine as an antimicrobial. However, bromine is toxic and requires special hazardous material [HAZMAT] handling which is time consuming and expensive. While the Navy has placed bromine-free systems on most of the large-deck surface ship classes, it has not yet removed bromine systems from the Littoral Combat Ship, cruisers, or destroyers.

(3) Procures Cooperative Engagement Capability (CEC) combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships. Flight IIA DDGs have previously received CEC installation.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 1 / DM001 - DDG MODERNIZATION HME (GEDMS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	355.172	29.767	28.257	25.653	0.000	25.653	28.278	23.835	19.030	13.387	77.315	600.694
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	355.172	29.767	28.257	25.653	0.000	25.653	28.278	23.835	19.030	13.387	77.315	600.694
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**355.172**	**29.767**	**28.257**	**25.653**	**0.000**	**25.653**	**28.278**	**23.835**	**19.030**	**13.387**	**77.315**	**600.694**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Gigabit Ethernet Data Multiplexing System (GEDMS) replaces the obsolete copper machinery control LAN infrastructure with a new system based on the widely used Ethernet industry standard.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item:
Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period,
engineering services will fluctuate depending on the number of ships in each year.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 1 / DM001 - DDG MODERNIZATION HME (GEDMS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:** 0604567N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (GEDMS)												
B Kits												
Recurring												
1.1.1) GEDMS Equipment - NonOrganic	27 / 97.719	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 97.719
1.1.2) GEDMS EQUIPMENT FLIGHT IIA - NonOrganic	16 / 22.246	3 / 4.549	3 / 4.631	1 / 1.571	- / -	1 / 1.571	2 / 3.199	- / -	2 / 3.316	2 / 3.375	10 / 16.580	39 / 59.467
Subtotal: Recurring	*- / 119.965*	*- / 4.549*	*- / 4.631*	*- / 1.571*	*- / -*	*- / 1.571*	*- / 3.199*	*- / -*	*- / 3.316*	*- / 3.375*	*- / 16.580*	*- / 157.186*
Subtotal: DM001 - DDG MODERNIZATION HME (GEDMS)	*43 / 119.965*	*3 / 4.549*	*3 / 4.631*	*1 / 1.571*	*- / -*	*1 / 1.571*	*2 / 3.199*	*- / -*	*2 / 3.316*	*2 / 3.375*	*10 / 16.580*	*66 / 157.186*
Subtotal: Procurement, All Modification Items	*- / 119.965*	*- / 4.549*	*- / 4.631*	*- / 1.571*	*- / -*	*- / 1.571*	*- / 3.199*	*- / -*	*- / 3.316*	*- / 3.375*	*- / 16.580*	*- / 157.186*
Support *(All Modification Items)*												
2.1) GEDMS ENGINEERING SERVICES	- / 50.021	- / 4.785	- / 4.871	- / 4.958	- / -	- / 4.958	- / 5.048	- / 5.138	- / 5.231	- / 5.325	- / 20.562	- / 105.939
Subtotal: Support	*- / 50.021*	*- / 4.785*	*- / 4.871*	*- / 4.958*	*- / -*	*- / 4.958*	*- / 5.048*	*- / 5.138*	*- / 5.231*	*- / 5.325*	*- / 20.562*	*- / 105.939*
Installation												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (GEDMS)	- / 185.186	- / 20.433	- / 18.755	- / 19.124	- / 0.000	- / 19.124	- / 20.031	- / 18.697	- / 10.483	- / 4.687	- / 40.173	- / 337.569
Subtotal: Installation	*- / 185.186*	*- / 20.433*	*- / 18.755*	*- / 19.124*	*- / -*	*- / 19.124*	*- / 20.031*	*- / 18.697*	*- / 10.483*	*- / 4.687*	*- / 40.173*	*- / 337.569*
Total												
Total Cost (Procurement + Support + Installation)	**355.172**	**29.767**	**28.257**	**25.653**	**0.000**	**25.653**	**28.278**	**23.835**	**19.030**	**13.387**	**77.315**	**600.694**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 1 / DM001 - DDG MODERNIZATION HME (GEDMS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (GEDMS)

Manufacturer Information

Manufacturer Name: Boeing | Manufacturer Location: Anaheim, CA

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jun 2023	Jun 2024	Jun 2025		Jun 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026		Oct 2028	

Installation Information

Method of Implementation: SHIPYARD:: Installation Name: GEDMS Equipment

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	24 / 121.606	1 / 6.729	- / -	- / -	- / -	- / -	0 / 1.934	1 / 5.257	- / -	- / -	1 / 0.000	27 / 135.526
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	24 / 121.606	1 / 6.729	- / -	- / -	- / -	- / -	0 / 1.934	1 / 5.257	- / -	- / -	1 / 0.000	27 / 135.526

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	24	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	27
Out	24	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	27

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 1 / DM001 - DDG MODERNIZATION HME (GEDMS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (GEDMS)

Installation Information

Method of Implementation: [none specified]:: Installation Name: GEDMS EQUIPMENT FLIGHT IIA

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	10 / 63.580	2 / 12.880	3 / 13.253	0 / 0.289	0 / 0.000	0 / 0.289	0 / 1.614	1 / 4.495	- / -	- / -	0 / 0.000	16 / 96.111
FY 2022	- / -	0 / 0.824	0 / 4.608	3 / 13.479	0 / 0.000	3 / 13.479	- / -	- / -	- / -	- / -	0 / 0.000	3 / 18.911
FY 2023	- / -	- / -	0 / 0.894	0 / 5.000	0 / 0.000	0 / 5.000	3 / 13.857	- / -	- / -	- / -	0 / 0.000	3 / 19.751
FY 2024	- / -	- / -	- / -	0 / 0.356	0 / 0.000	0 / 0.356	0 / 1.990	1 / 5.390	- / -	- / -	0 / 0.000	1 / 7.736
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.636	0 / 3.555	2 / 9.750	- / -	0 / 0.000	2 / 13.941
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.733	0 / 4.089	2 / 11.020	2 / 15.842
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.598	2 / 12.573	2 / 13.171
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 16.580	10 / 16.580
Total	10 / 63.580	2 / 13.704	3 / 18.755	3 / 19.124	0 / 0.000	3 / 19.124	3 / 18.097	2 / 13.440	2 / 10.483	0 / 4.687	14 / 40.173	39 / 202.043

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	10	1	1	-	-	1	-	-	2	-	1	-	2	-	-	-	3	-	1	1	-	-	1	-	1	-	-	-	-	14	39
Out	6	-	2	2	2	-	3	1	1	1	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	18	39

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 2 / DM001 - DDG MODERNIZATION HME (MCS/DCS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	634.364	62.842	57.824	52.020	0.000	52.020	58.928	46.585	41.474	32.326	186.287	1,172.650
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	634.364	62.842	57.824	52.020	0.000	52.020	58.928	46.585	41.474	32.326	186.287	1,172.650
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**634.364**	**62.842**	**57.824**	**52.020**	**0.000**	**52.020**	**58.928**	**46.585**	**41.474**	**32.326**	**186.287**	**1,172.650**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Machinery Control System (MCS) replaces the obsolete control consoles while also delivering enhanced capability to the fleet through improved situational awareness and reconfigurable user stations. The new consoles use COTS-based computers which connect via Versa Modular Eurocard (VME)-chassis technology. The VME architecture is expected to be supportable for the remaining service life of the ship and will enable computer upgrades within the chassis thereby mitigating future obsolescence concerns.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item:
Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period,
engineering services will fluctuate depending on the number of ships in each year.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 2 / DM001 - DDG MODERNIZATION HME (MCS/DCS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:** 0604567N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (MCS/DCS)												
B Kits												
Recurring												
1.1.1) MCS/DCS EQUIPMENT FL II/IIA - NonOrganic	43 / 180.986	3 / 13.647	3 / 13.635	1 / 4.627	- / -	1 / 4.627	2 / 9.420	- / -	2 / 9.762	2 / 9.938	10 / 48.810	66 / 290.825
Subtotal: Recurring	*- / 180.986*	*- / 13.647*	*- / 13.635*	*- / 4.627*	*- / -*	*- / 4.627*	*- / 9.420*	*- / -*	*- / 9.762*	*- / 9.938*	*- / 48.810*	*- / 290.825*
Non-Recurring												
1.2.1) MCS/DCS 1ST ARTICLE & NRE - Organic	- / 8.643	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.643
Subtotal: Non-Recurring	*- / 8.643*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.643*
Subtotal: DM001 - DDG MODERNIZATION HME (MCS/DCS)	*43 / 189.629*	*3 / 13.647*	*3 / 13.635*	*1 / 4.627*	*- / -*	*1 / 4.627*	*2 / 9.420*	*- / -*	*2 / 9.762*	*2 / 9.938*	*10 / 48.810*	*66 / 299.468*
Subtotal: Procurement, All Modification Items	*- / 189.629*	*- / 13.647*	*- / 13.635*	*- / 4.627*	*- / -*	*- / 4.627*	*- / 9.420*	*- / -*	*- / 9.762*	*- / 9.938*	*- / 48.810*	*- / 299.468*
Support *(All Modification Items)*												
2.1) MCS/DCS ENGINEERING SERVICES	- / 113.304	- / 11.089	- / 13.412	- / 13.680	- / -	- / 13.680	- / 13.954	- / 14.233	- / 14.518	- / 12.341	- / 47.654	- / 254.185
Subtotal: Support	*- / 113.304*	*- / 11.089*	*- / 13.412*	*- / 13.680*	*- / -*	*- / 13.680*	*- / 13.954*	*- / 14.233*	*- / 14.518*	*- / 12.341*	*- / 47.654*	*- / 254.185*
Installation												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (MCS/DCS)	- / 331.431	- / 38.106	- / 30.777	- / 33.713	- / 0.000	- / 33.713	- / 35.554	- / 32.352	- / 17.194	- / 10.047	- / 89.823	- / 618.997
Subtotal: Installation	*- / 331.431*	*- / 38.106*	*- / 30.777*	*- / 33.713*	*- / -*	*- / 33.713*	*- / 35.554*	*- / 32.352*	*- / 17.194*	*- / 10.047*	*- / 89.823*	*- / 618.997*
Total												
Total Cost (Procurement + Support + Installation)	**634.364**	**62.842**	**57.824**	**52.020**	**0.000**	**52.020**	**58.928**	**46.585**	**41.474**	**32.326**	**186.287**	**1,172.650**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 2 / DM001 - DDG MODERNIZATION HME (MCS/DCS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (MCS/DCS)

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Orlando, FL

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jul 2023	Jun 2024	Jun 2025		Jun 2027	
Delivery Dates	Oct 2023	Nov 2024	Nov 2025	Nov 2026		Nov 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: MCS/DCS EQUIPMENT FL II/IIA

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	35 / 331.431	2 / 36.522	3 / 19.032	0 / 0.555	0 / 0.000	0 / 0.555	0 / 7.720	2 / 15.788	- / -	- / -	1 / 0.000	43 / 411.048
FY 2022	- / -	0 / 1.584	0 / 10.026	3 / 21.596	0 / 0.000	3 / 21.596	- / -	- / -	- / -	- / -	0 / 0.000	3 / 33.206
FY 2023	- / -	- / -	0 / 1.719	0 / 10.878	0 / 0.000	0 / 10.878	3 / 22.282	- / -	- / -	- / -	0 / 0.000	3 / 34.879
FY 2024	- / -	- / -	- / -	0 / 0.684	0 / 0.000	0 / 0.684	0 / 4.330	1 / 8.829	- / -	- / -	0 / 0.000	1 / 13.843
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.222	0 / 7.735	2 / 15.785	- / -	0 / 0.000	2 / 24.742
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.409	0 / 8.897	2 / 18.902	2 / 29.208
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.150	0 / 22.111	2 / 23.261
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 48.810	10 / 48.810
Total	35 / 331.431	2 / 38.106	3 / 30.777	3 / 33.713	0 / 0.000	3 / 33.713	3 / 35.554	3 / 32.352	2 / 17.194	2 / 10.047	13 / 89.823	66 / 618.997

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	35	1	1	-	-	1	-	-	2	2	-	1	-	-	-	-	3	-	-	3	-	-	1	-	1	-	1	-	1	13	66
Out	32	-	1	1	1	-	3	-	-	1	-	-	-	-	2	1	1	-	-	-	-	-	-	-	4	-	-	2	-	17	66

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 3 / DM001 - DDG MODERNIZATION HME (DVSS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	53.567	6.259	5.466	4.019	0.000	4.019	4.864	3.335	3.181	1.919	126.665	209.275
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	53.567	6.259	5.466	4.019	0.000	4.019	4.864	3.335	3.181	1.919	126.665	209.275
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**53.567**	**6.259**	**5.466**	**4.019**	**0.000**	**4.019**	**4.864**	**3.335**	**3.181**	**1.919**	**126.665**	**209.275**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Digital Video Surveillance System (DVSS) is a network of video cameras which are integrated into the Machinery Control System. This system is primarily a watch-stander situational awareness tool which supplements the workload reduction benefits of the new MCS.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 3 / DM001 - DDG MODERNIZATION HME (DVSS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:** 0604567N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (DVSS)												
B Kits												
Recurring												
1.1.1) DVSS Equipment - NonOrganic	43 / 19.561	3 / 1.679	3 / 1.710	1 / 0.580	- / -	1 / 0.580	2 / 1.181	- / -	2 / 1.224	2 / 1.246	10 / 61.200	66 / 88.381
Subtotal: Recurring	*- / 19.561*	*- / 1.679*	*- / 1.710*	*- / 0.580*	*- / -*	*- / 0.580*	*- / 1.181*	*- / -*	*- / 1.224*	*- / 1.246*	*- / 61.200*	*- / 88.381*
Non-Recurring												
1.2.1) DVSS 1st Article & NRE - Organic	- / 0.477	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.477
Subtotal: Non-Recurring	*- / 0.477*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.477*
Subtotal: DM001 - DDG MODERNIZATION HME (DVSS)	*43 / 20.038*	*3 / 1.679*	*3 / 1.710*	*1 / 0.580*	*- / -*	*1 / 0.580*	*2 / 1.181*	*- / -*	*2 / 1.224*	*2 / 1.246*	*10 / 61.200*	*66 / 88.858*
Subtotal: Procurement, All Modification Items	*- / 20.038*	*- / 1.679*	*- / 1.710*	*- / 0.580*	*- / -*	*- / 0.580*	*- / 1.181*	*- / -*	*- / 1.224*	*- / 1.246*	*- / 61.200*	*- / 88.858*
Installation												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (DVSS)	- / 33.529	- / 4.580	- / 3.756	- / 3.439	- / 0.000	- / 3.439	- / 3.683	- / 3.335	- / 1.957	- / 0.673	- / 65.465	- / 120.417
Subtotal: Installation	*- / 33.529*	*- / 4.580*	*- / 3.756*	*- / 3.439*	*- / -*	*- / 3.439*	*- / 3.683*	*- / 3.335*	*- / 1.957*	*- / 0.673*	*- / 65.465*	*- / 120.417*
Total												
Total Cost (Procurement + Support + Installation)	**53.567**	**6.259**	**5.466**	**4.019**	**0.000**	**4.019**	**4.864**	**3.335**	**3.181**	**1.919**	**126.665**	**209.275**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 3 / DM001 - DDG MODERNIZATION HME (DVSS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (DVSS)

Manufacturer Information

Manufacturer Name: NSWC SSES | Manufacturer Location: Philadelphia, PA

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jul 2023	Jul 2024	Jul 2025		Jun 2027	
Delivery Dates	Oct 2023	Nov 2024	Nov 2025	Nov 2026		Nov 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: DVSS Equipment

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	34 / 33.529	3 / 4.434	3 / 2.959	0 / 0.163	0 / 0.000	0 / 0.163	0 / 0.702	2 / 1.828	- / -	- / -	1 / 0.000	43 / 43.615
FY 2022	- / -	0 / 0.146	0 / 0.639	3 / 2.520	0 / 0.000	3 / 2.520	- / -	- / -	- / -	- / -	0 / 0.000	3 / 3.305
FY 2023	- / -	- / -	0 / 0.158	0 / 0.693	0 / 0.000	0 / 0.693	3 / 2.593	- / -	- / -	- / -	0 / 0.000	3 / 3.444
FY 2024	- / -	- / -	- / -	0 / 0.063	0 / 0.000	0 / 0.063	0 / 0.276	1 / 1.014	- / -	- / -	0 / 0.000	1 / 1.353
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.112	0 / 0.493	2 / 1.828	- / -	0 / 0.000	2 / 2.433
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.129	0 / 0.567	2 / 2.074	2 / 2.770
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.106	2 / 2.191	2 / 2.297
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 61.200	10 / 61.200
Total	34 / 33.529	3 / 4.580	3 / 3.756	3 / 3.439	0 / 0.000	3 / 3.439	3 / 3.683	3 / 3.335	2 / 1.957	0 / 0.673	15 / 65.465	66 / 120.417

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	34	1	2	-	-	1	-	-	2	1	-	1	1	-	-	-	3	-	1	2	-	-	1	-	1	-	-	-	-	15	66
Out	34	-	2	-	-	-	1	-	-	1	-	-	1	-	2	1	-	1	-	-	-	-	-	-	4	-	-	1	-	18	66

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	22.226	1.042	0.000	0.000	0.000	0.000	0.478	0.640	0.000	0.000	0.000	24.386
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	22.226	1.042	0.000	0.000	0.000	0.000	0.478	0.640	0.000	0.000	0.000	24.386
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**22.226**	**1.042**	**0.000**	**0.000**	**0.000**	**0.000**	**0.478**	**0.640**	**0.000**	**0.000**	**0.000**	**24.386**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Shipwide Interior Wireless Communication System (SIWCS) - provides point-to-point coverage throughout the internal spaces of the ship as well as topside, topside-to-interior, line of sight ship-to-ship & line of sight ship-to-shore communications capabilities. All FLT IIAs (DDG 79+) have a version of SIWCS installed.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:** 0604567N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)												
B Kits												
Recurring												
1.1.1) Wireless Communications Equipment - NonOrganic	20 / 8.386	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 8.386
Subtotal: Recurring	*- / 8.386*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.386*
Subtotal: DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)	*20 / 8.386*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*20 / 8.386*
Subtotal: Procurement, All Modification Items	*- / 8.386*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.386*
Installation												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)	- / 13.840	- / 1.042	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.478	- / 0.640	- / 0.000	- / 0.000	- / 0.000	- / 16.000
Subtotal: Installation	*- / 13.840*	*- / 1.042*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.478*	*- / 0.640*	*- / -*	*- / -*	*- / 0.000*	*- / 16.000*
Total												
Total Cost (Procurement + Support + Installation)	**22.226**	**1.042**	**0.000**	**0.000**	**0.000**	**0.000**	**0.478**	**0.640**	**0.000**	**0.000**	**0.000**	**24.386**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)

Manufacturer Information

Manufacturer Name: Naval Information Warfare Center Atlantic | Manufacturer Location: Charleston, SC

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: Wireless Communications Equipment

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	17 / 13.840	1 / 1.042	1 / 0.000	- / -	- / -	- / -	0 / 0.478	1 / 0.640	- / -	- / -	0 / 0.000	20 / 16.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	17 / 13.840	1 / 1.042	1 / 0.000	- / -	- / -	- / -	0 / 0.478	1 / 0.640	- / -	- / -	0 / 0.000	20 / 16.000

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	17	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	20
Out	17	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	20

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 5 / DM001 - DDG MODERNIZATION HME (IBNS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	274.181	25.640	23.087	16.331	0.000	16.331	20.632	11.969	14.849	12.956	104.334	503.979
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	274.181	25.640	23.087	16.331	0.000	16.331	20.632	11.969	14.849	12.956	104.334	503.979
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**274.181**	**25.640**	**23.087**	**16.331**	**0.000**	**16.331**	**20.632**	**11.969**	**14.849**	**12.956**	**104.334**	**503.979**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Integrated Bridge & Navigation System (IBNS) replaces obsolete bridge consoles and introduces flexibility with how the pilot house is managed during navigation. The key benefit is the ability for operating with fewer watch-standers, reduced watch standard workloads, and improved safety of navigation.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item:
Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period,
engineering services will fluctuate depending on the number of ships in each year.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 5 / DM001 - DDG MODERNIZATION HME (IBNS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:** 0604567N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (IBNS)												
B Kits												
Recurring												
1.1.1) IBNS Equipment - NonOrganic	43 / 142.585	3 / 10.745	3 / 10.939	1 / 3.712	- / -	1 / 3.712	2 / 7.557	- / -	2 / 7.832	2 / 7.973	10 / 39.160	66 / 230.503
1.1.2) IBNS 1st Article & NRE - Organic	- / 4.186	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.186
Subtotal: Recurring	*- / 146.771*	*- / 10.745*	*- / 10.939*	*- / 3.712*	*- / -*	*- / 3.712*	*- / 7.557*	*- / -*	*- / 7.832*	*- / 7.973*	*- / 39.160*	*- / 234.689*
Subtotal: DM001 - DDG MODERNIZATION HME (IBNS)	*43 / 146.771*	*3 / 10.745*	*3 / 10.939*	*1 / 3.712*	*- / -*	*1 / 3.712*	*2 / 7.557*	*- / -*	*2 / 7.832*	*2 / 7.973*	*10 / 39.160*	*66 / 234.689*
Subtotal: Procurement, All Modification Items	*- / 146.771*	*- / 10.745*	*- / 10.939*	*- / 3.712*	*- / -*	*- / 3.712*	*- / 7.557*	*- / -*	*- / 7.832*	*- / 7.973*	*- / 39.160*	*- / 234.689*
Support *(All Modification Items)*												
2.1) IBNS ENGINEERING SERVICES	- / 13.969	- / 1.419	- / 1.444	- / 1.470	- / -	- / 1.470	- / 1.497	- / 1.524	- / 1.551	- / 1.579	- / 6.098	- / 30.551
Subtotal: Support	*- / 13.969*	*- / 1.419*	*- / 1.444*	*- / 1.470*	*- / -*	*- / 1.470*	*- / 1.497*	*- / 1.524*	*- / 1.551*	*- / 1.579*	*- / 6.098*	*- / 30.551*
Installation												
Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (IBNS)	- / 113.441	- / 13.476	- / 10.704	- / 11.149	- / 0.000	- / 11.149	- / 11.578	- / 10.445	- / 5.466	- / 3.404	- / 59.076	- / 238.739
Subtotal: Installation	*- / 113.441*	*- / 13.476*	*- / 10.704*	*- / 11.149*	*- / -*	*- / 11.149*	*- / 11.578*	*- / 10.445*	*- / 5.466*	*- / 3.404*	*- / 59.076*	*- / 238.739*
Total												
Total Cost (Procurement + Support + Installation)	**274.181**	**25.640**	**23.087**	**16.331**	**0.000**	**16.331**	**20.632**	**11.969**	**14.849**	**12.956**	**104.334**	**503.979**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 5 / DM001 - DDG MODERNIZATION HME (IBNS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (IBNS)

Manufacturer Information

Manufacturer Name: Northrop Grumman Sperry | Manufacturer Location: Charlottesville, VA

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jul 2023	Jul 2024	Jul 2025		Jul 2027	
Delivery Dates	Oct 2023	Nov 2024	Nov 2025	Nov 2026		Nov 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: IBNS Equipment

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	34 / 113.441	3 / 12.963	3 / 6.731	0 / 0.360	0 / 0.000	0 / 0.360	0 / 2.631	2 / 5.010	- / -	- / -	1 / 0.000	43 / 141.136
FY 2022	- / -	0 / 0.513	0 / 3.417	3 / 6.860	0 / 0.000	3 / 6.860	- / -	- / -	- / -	- / -	0 / 0.000	3 / 10.790
FY 2023	- / -	- / -	0 / 0.556	0 / 3.707	0 / 0.000	0 / 3.707	3 / 7.075	- / -	- / -	- / -	0 / 6.991	3 / 18.329
FY 2024	- / -	- / -	- / -	0 / 0.222	0 / 0.000	0 / 0.222	0 / 1.476	1 / 2.799	- / -	- / -	0 / 0.000	1 / 4.497
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.396	0 / 2.636	2 / 5.010	- / -	0 / 0.000	2 / 8.042
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.456	0 / 3.032	2 / 5.735	2 / 9.223
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.372	0 / 7.190	2 / 7.562
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 39.160	10 / 39.160
Total	34 / 113.441	3 / 13.476	3 / 10.704	3 / 11.149	0 / 0.000	3 / 11.149	3 / 11.578	3 / 10.445	2 / 5.466	2 / 3.404	13 / 59.076	66 / 238.739

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	34	1	1	1	-	1	-	-	2	1	-	1	1	-	-	-	3	-	1	2	-	-	1	-	1	-	1	-	1	13	66
Out	31	-	1	1	-	-	3	-	1	1	-	-	1	-	2	1	-	1	-	-	-	-	-	-	4	-	-	1	-	18	66

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 6 / DM001 - HES-C
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	8.531	33.866	0.000	33.866	37.344	71.874	76.920	87.029	1,178.770	1,494.334
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	8.531	33.866	0.000	33.866	37.344	71.874	76.920	87.029	1,178.770	1,494.334
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**8.531**	**33.866**	**0.000**	**33.866**	**37.344**	**71.874**	**76.920**	**87.029**	**1,178.770**	**1,494.334**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

High Efficiency Super Capacity (HES-C) Chiller Provides modernization to 50 year old Air Conditioning and Refrigeration (AC&R) systems installed on the DDG-51 Class. HES-C provides existing 200-ton AC&R systems, with an additional 125-tons of capacity by changing from a single-stage to a two stage chiller. It also reduces the amount of mechanical complexity making it lighter, more efficient and improving operational availability.

This upgrade would be conducted on all five AC&R systems on DDG-91 and following. This additional capacity is required to be installed conjunctively with SPY-6 (DM014) to deliver enough cooling capacity for the Aegis Weapon System. HES-C has a two year production lead time.

Engineering Services

FY24 funding to support Non-Recurring Engineering for first article testing to ensure system can operate in a shipboard environment.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 6 / DM001 - HES-C
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM001 - HES-C												
B Kits												
Recurring												
1.1.1) DM001 - HES-C - NonOrganic	- / -	- / -	- / -	1 / 25.000	- / -	1 / 25.000	1 / 25.450	2 / 51.816	2 / 52.749	2 / 53.698	10 / 557.130	18 / 765.843
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / 25.000*	*- / -*	*- / 25.000*	*- / 25.450*	*- / 51.816*	*- / 52.749*	*- / 53.698*	*- / 557.130*	*- / 765.843*
Subtotal: DM001 - HES-C	*- / -*	*- / -*	*- / -*	*1 / 25.000*	*- / -*	*1 / 25.000*	*1 / 25.450*	*2 / 51.816*	*2 / 52.749*	*2 / 53.698*	*10 / 557.130*	*18 / 765.843*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / 25.000*	*- / -*	*- / 25.000*	*- / 25.450*	*- / 51.816*	*- / 52.749*	*- / 53.698*	*- / 557.130*	*- / 765.843*
Support *(All Modification Items)*												
2.1) ENGINEERING SERVICES	- / -	- / -	- / 8.531	- / 8.702	- / -	- / 8.702	- / 8.876	- / 9.053	- / 9.234	- / 9.419	- / 25.420	- / 79.235
Subtotal: Support	*- / 0.000*	*- / -*	*- / 8.531*	*- / 8.702*	*- / -*	*- / 8.702*	*- / 8.876*	*- / 9.053*	*- / 9.234*	*- / 9.419*	*- / 25.420*	*- / 79.235*
Installation												
Modification Item 1 of 1: DM001 - HES-C	- / 0.000	- / 0.000	- / 0.000	- / 0.164	- / 0.000	- / 0.164	- / 3.018	- / 11.005	- / 14.937	- / 23.912	- / 596.220	- / 649.256
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.164*	*- / -*	*- / 0.164*	*- / 3.018*	*- / 11.005*	*- / 14.937*	*- / 23.912*	*- / 596.220*	*- / 649.256*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**8.531**	**33.866**	**0.000**	**33.866**	**37.344**	**71.874**	**76.920**	**87.029**	**1,178.770**	**1,494.334**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 6 / DM001 - HES-C
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM001 - HES-C

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: New MFG - Loc
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 36

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Apr 2023	Apr 2024	Apr 2025	Apr 2026	Apr 2027	
Delivery Dates		Apr 2026	Apr 2027	Apr 2028	Apr 2029	Apr 2030	

Installation Information

Method of Implementation: [none specified]:: Installation Name: DM001 - HES-C

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	0 / 0.164	0 / 0.000	0 / 0.164	0 / 2.851	1 / 7.713	- / -	- / -	0 / 0.000	1 / 10.728
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.167	0 / 2.908	1 / 7.852	- / -	0 / 0.000	1 / 10.927
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.384	0 / 6.652	0 / 16.042	2 / 0.000	2 / 23.078
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.433	0 / 7.516	2 / 16.386	2 / 24.335
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.354	1 / 22.704	2 / 23.058
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 557.130	10 / 557.130
Total	- / -	- / -	- / -	0 / 0.164	0 / 0.000	0 / 0.164	0 / 3.018	1 / 11.005	1 / 14.937	1 / 23.912	15 / 596.220	18 / 649.256

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	15	18
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	18

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 7 / DM003 - MK 160 MOD 15 GWS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	116.644	16.239	17.487	10.264	0.000	10.264	14.015	5.615	12.836	11.794	97.708	302.602
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	116.644	16.239	17.487	10.264	0.000	10.264	14.015	5.615	12.836	11.794	97.708	302.602
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**116.644**	**16.239**	**17.487**	**10.264**	**0.000**	**10.264**	**14.015**	**5.615**	**12.836**	**11.794**	**97.708**	**302.602**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Procures MK 160 Mod 15 Gun Weapon System (GWS) that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 7 / DM003 - MK 160 MOD 15 GWS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM003 - MK 160 MOD 15 GWS												
B Kits												
Recurring												
1.1.1) MK 160 MOD 15 GWS EQUIPMENT - NonOrganic	22 / 72.487	3 / 10.919	3 / 11.115	1 / 3.772	- / -	1 / 3.772	2 / 7.679	- / -	2 / 7.958	2 / 8.101	10 / 39.790	45 / 161.821
Subtotal: Recurring	*- / 72.487*	*- / 10.919*	*- / 11.115*	*- / 3.772*	*- / -*	*- / 3.772*	*- / 7.679*	*- / -*	*- / 7.958*	*- / 8.101*	*- / 39.790*	*- / 161.821*
Subtotal: DM003 - MK 160 MOD 15 GWS	*22 / 72.487*	*3 / 10.919*	*3 / 11.115*	*1 / 3.772*	*- / -*	*1 / 3.772*	*2 / 7.679*	*- / -*	*2 / 7.958*	*2 / 8.101*	*10 / 39.790*	*45 / 161.821*
Subtotal: Procurement, All Modification Items	*- / 72.487*	*- / 10.919*	*- / 11.115*	*- / 3.772*	*- / -*	*- / 3.772*	*- / 7.679*	*- / -*	*- / 7.958*	*- / 8.101*	*- / 39.790*	*- / 161.821*
Support *(All Modification Items)*												
2.1) ENGINEERING SERVICES	- / 24.199	- / 2.464	- / 2.508	- / 2.553	- / -	- / 2.553	- / 2.599	- / 2.646	- / 2.694	- / 2.742	- / 13.234	- / 55.639
Subtotal: Support	*- / 24.199*	*- / 2.464*	*- / 2.508*	*- / 2.553*	*- / -*	*- / 2.553*	*- / 2.599*	*- / 2.646*	*- / 2.694*	*- / 2.742*	*- / 13.234*	*- / 55.639*
Installation												
Modification Item 1 of 1: DM003 - MK 160 MOD 15 GWS	- / 19.958	- / 2.856	- / 3.864	- / 3.939	- / 0.000	- / 3.939	- / 3.737	- / 2.969	- / 2.184	- / 0.951	- / 44.684	- / 85.142
Subtotal: Installation	*- / 19.958*	*- / 2.856*	*- / 3.864*	*- / 3.939*	*- / -*	*- / 3.939*	*- / 3.737*	*- / 2.969*	*- / 2.184*	*- / 0.951*	*- / 44.684*	*- / 85.142*
Total												
Total Cost (Procurement + Support + Installation)	**116.644**	**16.239**	**17.487**	**10.264**	**0.000**	**10.264**	**14.015**	**5.615**	**12.836**	**11.794**	**97.708**	**302.602**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 7 / DM003 - MK 160 MOD 15 GWS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM003 - MK 160 MOD 15 GWS

Manufacturer Information

Manufacturer Name: VARIOUS	Manufacturer Location: VARIOUS
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Apr 2022	Apr 2023	Apr 2024	Apr 2025		Apr 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026		Oct 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: MK 160 MOD 15 GWS EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 19.958	2 / 2.682	3 / 2.746	0 / 0.061	0 / 0.000	0 / 0.061	0 / 0.325	1 / 1.126	- / -	- / -	0 / 0.000	22 / 26.898
FY 2022	- / -	0 / 0.174	0 / 0.929	3 / 2.795	0 / 0.000	3 / 2.795	- / -	- / -	- / -	- / -	0 / 0.000	3 / 3.898
FY 2023	- / -	- / -	0 / 0.189	0 / 1.008	0 / 0.000	0 / 1.008	3 / 2.877	- / -	- / -	- / -	0 / 0.000	3 / 4.074
FY 2024	- / -	- / -	- / -	0 / 0.075	0 / 0.000	0 / 0.075	0 / 0.401	1 / 1.126	- / -	- / -	0 / 0.000	1 / 1.602
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.134	0 / 0.717	2 / 2.029	- / -	0 / 0.000	2 / 2.880
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.155	0 / 0.824	2 / 2.304	2 / 3.283
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.127	1 / 2.590	2 / 2.717
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 39.790	10 / 39.790
Total	16 / 19.958	2 / 2.856	3 / 3.864	3 / 3.939	0 / 0.000	3 / 3.939	3 / 3.737	2 / 2.969	2 / 2.184	1 / 0.951	13 / 44.684	45 / 85.142

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	16	1	1	-	-	1	1	-	1	1	-	2	-	-	-	-	3	-	1	1	-	-	1	-	1	-	-	1	-	13	45
Out	14	-	1	-	2	-	1	-	-	-	1	1	-	-	1	1	-	2	-	-	-	-	-	-	3	-	-	1	-	17	45

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 8 / DM004 - AWS UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	862.789	122.557	143.829	103.845	0.000	103.845	122.570	59.438	94.216	66.968	161.355	1,737.567
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	862.789	122.557	143.829	103.845	0.000	103.845	122.570	59.438	94.216	66.968	161.355	1,737.567
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**862.789**	**122.557**	**143.829**	**103.845**	**0.000**	**103.845**	**122.570**	**59.438**	**94.216**	**66.968**	**161.355**	**1,737.567**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures equipment for the Aegis Weapon System (AWS) Upgrades that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item:
Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period,
engineering services will fluctuate depending on the number of ships in each year.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 8 / DM004 - AWS UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM004 - AWS UPGRADE												
B Kits												
Recurring												
1.1.1) AWS EQUIPMENT - NonOrganic	22 / 446.914	3 / 61.533	3 / 62.641	1 / 21.256	- / -	1 / 21.256	2 / 43.278	- / -	2 / 44.850	2 / 45.657	10 / 22.425	45 / 748.554
Subtotal: Recurring	*- / 446.914*	*- / 61.533*	*- / 62.641*	*- / 21.256*	*- / -*	*- / 21.256*	*- / 43.278*	*- / -*	*- / 44.850*	*- / 45.657*	*- / 22.425*	*- / 748.554*
Subtotal: DM004 - AWS UPGRADE	*22 / 446.914*	*3 / 61.533*	*3 / 62.641*	*1 / 21.256*	*- / -*	*1 / 21.256*	*2 / 43.278*	*- / -*	*2 / 44.850*	*2 / 45.657*	*10 / 22.425*	*45 / 748.554*
Subtotal: Procurement, All Modification Items	*- / 446.914*	*- / 61.533*	*- / 62.641*	*- / 21.256*	*- / -*	*- / 21.256*	*- / 43.278*	*- / -*	*- / 44.850*	*- / 45.657*	*- / 22.425*	*- / 748.554*
Support *(All Modification Items)*												
2.1) ENGINEERING SERVICES	- / 34.924	- / 4.129	- / 4.204	- / 4.279	- / -	- / 4.279	- / 4.356	- / 4.435	- / 4.514	- / 4.596	- / 17.745	- / 83.182
Subtotal: Support	*- / 34.924*	*- / 4.129*	*- / 4.204*	*- / 4.279*	*- / -*	*- / 4.279*	*- / 4.356*	*- / 4.435*	*- / 4.514*	*- / 4.596*	*- / 17.745*	*- / 83.182*
Installation												
Modification Item 1 of 1: DM004 - AWS UPGRADE	- / 380.951	- / 56.895	- / 76.984	- / 78.310	- / 0.000	- / 78.310	- / 74.936	- / 55.003	- / 44.852	- / 16.715	- / 121.185	- / 905.831
Subtotal: Installation	*- / 380.951*	*- / 56.895*	*- / 76.984*	*- / 78.310*	*- / -*	*- / 78.310*	*- / 74.936*	*- / 55.003*	*- / 44.852*	*- / 16.715*	*- / 121.185*	*- / 905.831*
Total												
Total Cost (Procurement + Support + Installation)	**862.789**	**122.557**	**143.829**	**103.845**	**0.000**	**103.845**	**122.570**	**59.438**	**94.216**	**66.968**	**161.355**	**1,737.567**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 8 / DM004 - AWS UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM004 - AWS UPGRADE

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: MOORESTOWN, NJ
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Feb 2022	Feb 2023	Feb 2024	Feb 2025		Feb 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026		Oct 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: AWS EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 380.951	2 / 53.647	3 / 57.281	0 / 1.138	0 / 0.000	0 / 1.138	0 / 5.668	1 / 19.412	- / -	- / -	0 / 0.000	22 / 518.097
FY 2022	- / -	0 / 3.248	0 / 16.179	3 / 58.215	0 / 0.000	3 / 58.215	- / -	- / -	- / -	- / -	0 / 0.000	3 / 77.642
FY 2023	- / -	- / -	0 / 3.524	0 / 17.554	0 / 0.000	0 / 17.554	3 / 59.774	- / -	- / -	- / -	0 / 0.000	3 / 80.852
FY 2024	- / -	- / -	- / -	0 / 1.403	0 / 0.000	0 / 1.403	0 / 6.988	1 / 23.109	- / -	- / -	0 / 0.000	1 / 31.500
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.506	0 / 12.482	2 / 41.964	- / -	0 / 0.000	2 / 56.952
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.888	0 / 14.357	2 / 47.205	2 / 64.450
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.358	1 / 51.555	2 / 53.913
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 22.425	10 / 22.425
Total	16 / 380.951	2 / 56.895	3 / 76.984	3 / 78.310	0 / 0.000	3 / 78.310	3 / 74.936	2 / 55.003	2 / 44.852	1 / 16.715	13 / 121.185	45 / 905.831

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	16	1	1	-	-	1	1	-	1	1	-	2	-	-	-	-	3	-	1	1	-	-	1	-	1	-	-	1	-	13	45
Out	13	-	1	-	2	-	2	-	-	-	1	1	-	-	1	1	-	2	-	-	-	-	-	-	3	-	-	2	-	16	45

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 9 / DM005 - MULTI-MISSION SIGPRO
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	458.446	64.433	68.994	33.910	0.000	33.910	52.483	12.274	6.484	0.000	0.000	697.024
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	458.446	64.433	68.994	33.910	0.000	33.910	52.483	12.274	6.484	0.000	0.000	697.024
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**458.446**	**64.433**	**68.994**	**33.910**	**0.000**	**33.910**	**52.483**	**12.274**	**6.484**	**0.000**	**0.000**	**697.024**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures Multi-Mission SIGPRO combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item:
Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period,
engineering services will fluctuate depending on the number of ships in each year.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 9 / DM005 - MULTI-MISSION SIGPRO
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM005 - MULTI-MISSION SIGPRO												
B Kits												
Recurring												
1.1.1) MULTI-MISSION SIGPRO EQUIPMENT - NonOrganic	23 / 370.731	3 / 52.640	3 / 53.587	1 / 18.184	- / -	1 / 18.184	2 / 37.022	- / -	- / -	- / -	- / -	32 / 532.164
Subtotal: Recurring	*- / 370.731*	*- / 52.640*	*- / 53.587*	*- / 18.184*	*- / -*	*- / 18.184*	*- / 37.022*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 532.164*
Subtotal: DM005 - MULTI-MISSION SIGPRO	*23 / 370.731*	*3 / 52.640*	*3 / 53.587*	*1 / 18.184*	*- / -*	*1 / 18.184*	*2 / 37.022*	*- / -*	*- / -*	*- / -*	*- / -*	*32 / 532.164*
Subtotal: Procurement, All Modification Items	*- / 370.731*	*- / 52.640*	*- / 53.587*	*- / 18.184*	*- / -*	*- / 18.184*	*- / 37.022*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 532.164*
Support *(All Modification Items)*												
2.1) ENGINEERING SERVICES	- / 28.138	- / 2.769	- / 3.572	- / 3.643	- / -	- / 3.643	- / 3.716	- / 3.791	- / -	- / -	- / -	- / 45.629
Subtotal: Support	*- / 28.138*	*- / 2.769*	*- / 3.572*	*- / 3.643*	*- / -*	*- / 3.643*	*- / 3.716*	*- / 3.791*	*- / -*	*- / -*	*- / 0.000*	*- / 45.629*
Installation												
Modification Item 1 of 1: DM005 - MULTI-MISSION SIGPRO	- / 59.577	- / 9.024	- / 11.835	- / 12.083	- / 0.000	- / 12.083	- / 11.745	- / 8.483	- / 6.484	- / 0.000	- / 0.000	- / 119.231
Subtotal: Installation	*- / 59.577*	*- / 9.024*	*- / 11.835*	*- / 12.083*	*- / -*	*- / 12.083*	*- / 11.745*	*- / 8.483*	*- / 6.484*	*- / -*	*- / 0.000*	*- / 119.231*
Total												
Total Cost (Procurement + Support + Installation)	**458.446**	**64.433**	**68.994**	**33.910**	**0.000**	**33.910**	**52.483**	**12.274**	**6.484**	**0.000**	**0.000**	**697.024**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 9 / DM005 - MULTI-MISSION SIGPRO
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM005 - MULTI-MISSION SIGPRO

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: MOORESTOWN, NJ
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Apr 2022	Apr 2023	Apr 2024	Apr 2025			
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026			

Installation Information

Method of Implementation: [none specified]:: Installation Name: MULTI-MISSION SIGPRO EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	17 / 59.577	2 / 8.499	3 / 8.794	0 / 0.227	0 / 0.000	0 / 0.227	0 / 1.068	1 / 2.984	- / -	- / -	0 / 0.000	23 / 81.149
FY 2022	- / -	0 / 0.525	0 / 2.472	3 / 8.947	0 / 0.000	3 / 8.947	- / -	- / -	- / -	- / -	0 / 0.000	3 / 11.944
FY 2023	- / -	- / -	0 / 0.569	0 / 2.682	0 / 0.000	0 / 2.682	3 / 9.204	- / -	- / -	- / -	0 / 0.000	3 / 12.455
FY 2024	- / -	- / -	- / -	0 / 0.227	0 / 0.000	0 / 0.227	0 / 1.068	1 / 3.592	- / -	- / -	0 / 0.000	1 / 4.887
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.405	0 / 1.907	2 / 6.484	- / -	0 / 0.000	2 / 8.796
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	17 / 59.577	2 / 9.024	3 / 11.835	3 / 12.083	0 / 0.000	3 / 12.083	3 / 11.745	2 / 8.483	2 / 6.484	- / -	0 / 0.000	32 / 119.231

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	17	1	1	-	-	1	1	-	1	1	-	2	-	-	-	-	3	-	1	1	-	-	1	-	1	-	-	-	-	-	32
Out	14	-	1	-	2	-	1	-	1	-	1	1	-	-	2	1	-	1	-	-	-	-	-	-	3	-	-	1	-	3	32

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 10 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	23.985	3.436	3.498	1.187	0.000	1.187	2.416	0.000	0.000	0.000	12.520	47.042
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	23.985	3.436	3.498	1.187	0.000	1.187	2.416	0.000	0.000	0.000	12.520	47.042
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**23.985**	**3.436**	**3.498**	**1.187**	**0.000**	**1.187**	**2.416**	**0.000**	**0.000**	**0.000**	**12.520**	**47.042**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Procures Multi-Mission Solid State Amplifier (SSA)/Continuous Wave Illumination (CWI) Microwave Tubes upgrades for DDG Modernization Program that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 10 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES												
B Kits												
Recurring												
1.1.1) MULTI-MISSION SSA/CWI MICROWAVE TUBES EQUIPMENT - Organic [4]	23 / 23.985	3 / 3.436	3 / 3.498	1 / 1.187	- / -	1 / 1.187	2 / 2.416	- / -	- / -	- / -	10 / 12.520	42 / 47.042
Subtotal: Recurring	*- / 23.985*	*- / 3.436*	*- / 3.498*	*- / 1.187*	*- / -*	*- / 1.187*	*- / 2.416*	*- / -*	*- / -*	*- / -*	*- / 12.520*	*- / 47.042*
Subtotal: DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES	*23 / 23.985*	*3 / 3.436*	*3 / 3.498*	*1 / 1.187*	*- / -*	*1 / 1.187*	*2 / 2.416*	*- / -*	*- / -*	*- / -*	*10 / 12.520*	*42 / 47.042*
Subtotal: Procurement, All Modification Items	*- / 23.985*	*- / 3.436*	*- / 3.498*	*- / 1.187*	*- / -*	*- / 1.187*	*- / 2.416*	*- / -*	*- / -*	*- / -*	*- / 12.520*	*- / 47.042*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**23.985**	**3.436**	**3.498**	**1.187**	**0.000**	**1.187**	**2.416**	**0.000**	**0.000**	**0.000**	**12.520**	**47.042**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 10 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES

Manufacturer Information

Manufacturer Name: VARIOUS	Manufacturer Location: VARIOUS
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Apr 2022	Apr 2023	Apr 2024	Apr 2025	Apr 2026	Apr 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026	Oct 2027	Oct 2028	

Footnotes:

(4) Installation costs for this equipment are captured in P40A/DM6IN-Installation. DDG Modernization Installation execution is funded in the year of availability, and Design Service Allocation (DSA) are two years prior to availability, and one year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP do not follow inflation and vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on local labor rates of Master Shipyard Repair contractors.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 11 / DM008 - MULTI-MISSION BMD CAPABILITY
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	40.466	5.710	5.813	1.973	0.000	1.973	4.016	0.000	4.162	4.237	20.810	87.187
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	40.466	5.710	5.813	1.973	0.000	1.973	4.016	0.000	4.162	4.237	20.810	87.187
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**40.466**	**5.710**	**5.813**	**1.973**	**0.000**	**1.973**	**4.016**	**0.000**	**4.162**	**4.237**	**20.810**	**87.187**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Procures Multi-Mission Ballistic Missile Defense (BMD) Capability combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 11 / DM008 - MULTI-MISSION BMD CAPABILITY
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM008 - MULTI-MISSION BMD CAPABILITY												
B Kits												
Recurring												
1.1.1) MULTI-MISSION BMD EQUIPMENT - Organic (5)	23 / 40.466	3 / 5.710	3 / 5.813	1 / 1.973	- / -	1 / 1.973	2 / 4.016	- / -	2 / 4.162	2 / 4.237	10 / 20.810	46 / 87.187
Subtotal: Recurring	*- / 40.466*	*- / 5.710*	*- / 5.813*	*- / 1.973*	*- / -*	*- / 1.973*	*- / 4.016*	*- / -*	*- / 4.162*	*- / 4.237*	*- / 20.810*	*- / 87.187*
Subtotal: DM008 - MULTI-MISSION BMD CAPABILITY	*23 / 40.466*	*3 / 5.710*	*3 / 5.813*	*1 / 1.973*	*- / -*	*1 / 1.973*	*2 / 4.016*	*- / -*	*2 / 4.162*	*2 / 4.237*	*10 / 20.810*	*46 / 87.187*
Subtotal: Procurement, All Modification Items	*- / 40.466*	*- / 5.710*	*- / 5.813*	*- / 1.973*	*- / -*	*- / 1.973*	*- / 4.016*	*- / -*	*- / 4.162*	*- / 4.237*	*- / 20.810*	*- / 87.187*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**40.466**	**5.710**	**5.813**	**1.973**	**0.000**	**1.973**	**4.016**	**0.000**	**4.162**	**4.237**	**20.810**	**87.187**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 11 / DM008 - MULTI-MISSION BMD CAPABILITY
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: DM008 - MULTI-MISSION BMD CAPABILITY		

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: MOORESTOWN, NJ
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Apr 2022	Apr 2023	Apr 2024	Apr 2025		Apr 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026		Oct 2028	

Footnotes:

(5) Installation costs for this equipment are captured in P40A/DM6IN-Installation. DDG Modernization Installation execution is funded in the year of availability, and Design Service Allocation (DSA) are two years prior to availability, and one year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP do not follow inflation and vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on local labor rates of Master Shipyard Repair contractors.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 12 / DM009 - VLS UPGRADES
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	204.817	27.522	29.456	18.147	0.000	18.147	24.219	10.646	22.450	20.741	158.332	516.330
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	204.817	27.522	29.456	18.147	0.000	18.147	24.219	10.646	22.450	20.741	158.332	516.330
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**204.817**	**27.522**	**29.456**	**18.147**	**0.000**	**18.147**	**24.219**	**10.646**	**22.450**	**20.741**	**158.332**	**516.330**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures Vertical Launch System (VLS) Modifications, Evolved Sea Sparrow Missile VLS Modifications, SM3 Operability Heating Ventilation Air Conditioning (HVAC) and VLS MODS for SM3 Block 3 combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 12 / DM009 - VLS UPGRADES
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM009 - VLS UPGRADES												
B Kits												
Recurring												
1.1.1) VLS EQUIPMENT - NonOrganic	22 / 124.476	3 / 17.172	3 / 17.481	1 / 5.932	- / -	1 / 5.932	2 / 12.077	- / -	2 / 12.516	2 / 12.741	10 / 62.580	45 / 264.975
Subtotal: Recurring	*- / 124.476*	*- / 17.172*	*- / 17.481*	*- / 5.932*	*- / -*	*- / 5.932*	*- / 12.077*	*- / -*	*- / 12.516*	*- / 12.741*	*- / 62.580*	*- / 264.975*
Subtotal: DM009 - VLS UPGRADES	*22 / 124.476*	*3 / 17.172*	*3 / 17.481*	*1 / 5.932*	*- / -*	*1 / 5.932*	*2 / 12.077*	*- / -*	*2 / 12.516*	*2 / 12.741*	*10 / 62.580*	*45 / 264.975*
Subtotal: Procurement, All Modification Items	*- / 124.476*	*- / 17.172*	*- / 17.481*	*- / 5.932*	*- / -*	*- / 5.932*	*- / 12.077*	*- / -*	*- / 12.516*	*- / 12.741*	*- / 62.580*	*- / 264.975*
Support *(All Modification Items)*												
2.1) ENGINEERING SERVICES	- / 49.735	- / 5.952	- / 6.059	- / 6.168	- / -	- / 6.168	- / 6.279	- / 6.392	- / 6.507	- / 6.624	- / 25.579	- / 119.295
Subtotal: Support	*- / 49.735*	*- / 5.952*	*- / 6.059*	*- / 6.168*	*- / -*	*- / 6.168*	*- / 6.279*	*- / 6.392*	*- / 6.507*	*- / 6.624*	*- / 25.579*	*- / 119.295*
Installation												
Modification Item 1 of 1: DM009 - VLS UPGRADES	- / 30.606	- / 4.398	- / 5.916	- / 6.047	- / 0.000	- / 6.047	- / 5.863	- / 4.254	- / 3.427	- / 1.376	- / 70.173	- / 132.060
Subtotal: Installation	*- / 30.606*	*- / 4.398*	*- / 5.916*	*- / 6.047*	*- / -*	*- / 6.047*	*- / 5.863*	*- / 4.254*	*- / 3.427*	*- / 1.376*	*- / 70.173*	*- / 132.060*
Total												
Total Cost (Procurement + Support + Installation)	**204.817**	**27.522**	**29.456**	**18.147**	**0.000**	**18.147**	**24.219**	**10.646**	**22.450**	**20.741**	**158.332**	**516.330**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 12 / DM009 - VLS UPGRADES
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM009 - VLS UPGRADES

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: MOORESTOWN, NJ
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Apr 2022	Apr 2023	Apr 2024	Apr 2025		Apr 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026		Oct 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: VLS EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 30.606	2 / 4.124	3 / 4.292	0 / 0.118	0 / 0.000	0 / 0.118	0 / 0.573	1 / 1.458	- / -	- / -	0 / 0.000	22 / 41.171
FY 2022	- / -	0 / 0.274	0 / 1.326	3 / 4.372	0 / 0.000	3 / 4.372	- / -	- / -	- / -	- / -	0 / 0.000	3 / 5.972
FY 2023	- / -	- / -	0 / 0.298	0 / 1.439	0 / 0.000	0 / 1.439	3 / 4.505	- / -	- / -	- / -	0 / 0.000	3 / 6.242
FY 2024	- / -	- / -	- / -	0 / 0.118	0 / 0.000	0 / 0.118	0 / 0.573	1 / 1.773	- / -	- / -	0 / 0.000	1 / 2.464
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.212	0 / 1.023	2 / 3.183	- / -	0 / 0.000	2 / 4.418
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.244	0 / 1.177	2 / 3.630	2 / 5.051
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.199	2 / 3.963	2 / 4.162
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 62.580	10 / 62.580
Total	16 / 30.606	2 / 4.398	3 / 5.916	3 / 6.047	0 / 0.000	3 / 6.047	3 / 5.863	2 / 4.254	2 / 3.427	0 / 1.376	14 / 70.173	45 / 132.060

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	16	1	1	-	-	1	1	-	1	1	-	2	-	-	-	-	3	-	1	1	-	-	1	-	1	-	-	-	-	14	45
Out	14	-	1	-	1	-	2	-	-	-	1	1	-	-	2	1	-	1	-	-	-	-	-	-	3	-	-	1	-	17	45

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 13 / DM011 - AN/SQQ-89 A(V15)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	174.437	5.352	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	179.789
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	174.437	5.352	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	179.789
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**174.437**	**5.352**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**179.789**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures improved AN/SQQ-89 A(V)15 with Multi-Functional Towed Array (MFTA) combat systems to replace the installed MIL-STD AN/SQQ-89(V) that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships. Flight IIA DDGs have previously received an SQQ-89(A)V15 installation.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item:
Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period,
engineering services will fluctuate depending on the number of ships in each year.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 13 / DM011 - AN/SQQ-89 A(V15)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM011 - AN/SQQ-89 A(V15)												
B Kits												
Recurring												
1.1.1) AN/SQQ-89 EQUIPMENT A(V15) - NonOrganic	12 / 94.095	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 94.095
Subtotal: Recurring	*- / 94.095*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 94.095*
Subtotal: DM011 - AN/SQQ-89 A(V15)	*12 / 94.095*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*12 / 94.095*
Subtotal: Procurement, All Modification Items	*- / 94.095*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 94.095*
Support *(All Modification Items)*												
2.1) ENGINEERING SERVICES	- / 32.778	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 32.778
Subtotal: Support	*- / 32.778*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 32.778*
Installation												
Modification Item 1 of 1: DM011 - AN/SQQ-89 A(V15)	- / 47.564	- / 5.352	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 52.916
Subtotal: Installation	*- / 47.564*	*- / 5.352*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 52.916*
Total												
Total Cost (Procurement + Support + Installation)	**174.437**	**5.352**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**179.789**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 13 / DM011 - AN/SQQ-89 A(V15)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM011 - AN/SQQ-89 A(V15)

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Syracuse, NY
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: AN/SQQ-89 EQUIPMENT A(V15)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	10 / 47.564	1 / 5.352	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	12 / 52.916
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	10 / 47.564	1 / 5.352	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	12 / 52.916

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	10	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	12
Out	10	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	12

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 14 / DM013 - (1 MC/DIAS UPGRADE)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	49.611	11.008	10.213	9.801	0.000	9.801	10.390	9.319	5.942	3.016	80.376	189.676
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	49.611	11.008	10.213	9.801	0.000	9.801	10.390	9.319	5.942	3.016	80.376	189.676
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**49.611**	**11.008**	**10.213**	**9.801**	**0.000**	**9.801**	**10.390**	**9.319**	**5.942**	**3.016**	**80.376**	**189.676**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures the Dynalec Integrated Announcing System (DIAS) that replaces the ship's existing obsolete and unreliable general announcing system, that enables key control stations to publish critical information to the ship by voice.

Integrated Logistics Support includes development of ILS documentation, review and certification. Environmental Quality Testing includes Shock, Vibration and EMI certification to ensure DIAS meets survivability requirements.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 14 / DM013 - (1 MC/DIAS UPGRADE)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM013 - (1 MC/DIAS UPGRADE)												
B Kits												
Recurring												
1.1.1) 1 MC/DIAS EQUIPMENT - NonOrganic	25 / 4.520	3 / 0.941	3 / 0.958	1 / 0.325	- / -	1 / 0.325	2 / 0.662	- / -	2 / 0.686	2 / 0.698	10 / 34.300	48 / 43.090
Subtotal: Recurring	*- / 4.520*	*- / 0.941*	*- / 0.958*	*- / 0.325*	*- / -*	*- / 0.325*	*- / 0.662*	*- / -*	*- / 0.686*	*- / 0.698*	*- / 34.300*	*- / 43.090*
Subtotal: DM013 - (1 MC/DIAS UPGRADE)	*25 / 4.520*	*3 / 0.941*	*3 / 0.958*	*1 / 0.325*	*- / -*	*1 / 0.325*	*2 / 0.662*	*- / -*	*2 / 0.686*	*2 / 0.698*	*10 / 34.300*	*48 / 43.090*
Subtotal: Procurement, All Modification Items	*- / 4.520*	*- / 0.941*	*- / 0.958*	*- / 0.325*	*- / -*	*- / 0.325*	*- / 0.662*	*- / -*	*- / 0.686*	*- / 0.698*	*- / 34.300*	*- / 43.090*
Installation												
Modification Item 1 of 1: DM013 - (1 MC/DIAS UPGRADE)	- / 45.091	- / 10.067	- / 9.255	- / 9.476	- / 0.000	- / 9.476	- / 9.728	- / 9.319	- / 5.256	- / 2.318	- / 46.076	- / 146.586
Subtotal: Installation	*- / 45.091*	*- / 10.067*	*- / 9.255*	*- / 9.476*	*- / -*	*- / 9.476*	*- / 9.728*	*- / 9.319*	*- / 5.256*	*- / 2.318*	*- / 46.076*	*- / 146.586*
Total												
Total Cost (Procurement + Support + Installation)	**49.611**	**11.008**	**10.213**	**9.801**	**0.000**	**9.801**	**10.390**	**9.319**	**5.942**	**3.016**	**80.376**	**189.676**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 14 / DM013 - (1 MC/DIAS UPGRADE)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM013 - (1 MC/DIAS UPGRADE)

Manufacturer Information

Manufacturer Name: Naval Information Warfare Center Atlantic	Manufacturer Location: Charleston, SC
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jun 2023	Jun 2024	Jun 2025		Jun 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026		Oct 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: 1 MC/DIAS EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 45.091	3 / 9.624	3 / 6.524	0 / 0.192	0 / 0.000	0 / 0.192	0 / 1.732	2 / 4.863	- / -	- / -	1 / 0.000	25 / 68.026
FY 2022	- / -	0 / 0.443	0 / 2.250	3 / 6.651	0 / 0.000	3 / 6.651	- / -	- / -	- / -	- / -	0 / 0.000	3 / 9.344
FY 2023	- / -	- / -	0 / 0.481	0 / 2.441	0 / 0.000	0 / 2.441	3 / 6.682	- / -	- / -	- / -	0 / 0.000	3 / 9.604
FY 2024	- / -	- / -	- / -	0 / 0.192	0 / 0.000	0 / 0.192	0 / 0.972	1 / 2.720	- / -	- / -	0 / 0.000	1 / 3.884
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.342	0 / 1.736	2 / 4.862	- / -	0 / 0.000	2 / 6.940
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.394	0 / 1.996	2 / 5.573	2 / 7.963
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.322	1 / 6.203	2 / 6.525
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 34.300	10 / 34.300
Total	16 / 45.091	3 / 10.067	3 / 9.255	3 / 9.476	0 / 0.000	3 / 9.476	3 / 9.728	3 / 9.319	2 / 5.256	1 / 2.318	14 / 46.076	48 / 146.586

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	16	1	2	-	-	1	-	-	2	1	-	1	1	-	-	-	3	-	1	2	-	-	1	-	1	-	-	1	-	14	48
Out	13	-	1	1	1	-	3	-	-	1	-	-	1	-	2	1	-	1	-	-	-	-	-	1	3	-	-	1	-	18	48

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 15 / DM013 - (MORIAH WIND SYSTEM)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	21.139	5.693	4.045	3.193	0.000	3.193	2.447	1.167	0.430	0.750	366.379	405.243
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	21.139	5.693	4.045	3.193	0.000	3.193	2.447	1.167	0.430	0.750	366.379	405.243
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**21.139**	**5.693**	**4.045**	**3.193**	**0.000**	**3.193**	**2.447**	**1.167**	**0.430**	**0.750**	**366.379**	**405.243**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures the Moriah Wind System (MWS) that provides DDGs with a digital wind speed and directional information to support safe execution of air, combat and casualty operations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 15 / DM013 - (MORIAH WIND SYSTEM)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM013 - (MORIAH WIND SYSTEM)												
B Kits												
Recurring												
1.1.1) MORIAH WIND SYSTEM EQUIPMENT - NonOrganic	25 / 4.667	3 / 0.975	2 / 0.662	1 / 0.337	- / -	1 / 0.337	- / -	- / -	1 / 0.355	- / -	1 / 0.355	33 / 7.351
Subtotal: Recurring	*- / 4.667*	*- / 0.975*	*- / 0.662*	*- / 0.337*	*- / -*	*- / 0.337*	*- / -*	*- / -*	*- / 0.355*	*- / -*	*- / 0.355*	*- / 7.351*
Subtotal: DM013 - (MORIAH WIND SYSTEM)	*25 / 4.667*	*3 / 0.975*	*2 / 0.662*	*1 / 0.337*	*- / -*	*1 / 0.337*	*- / -*	*- / -*	*1 / 0.355*	*- / -*	*1 / 0.355*	*33 / 7.351*
Subtotal: Procurement, All Modification Items	*- / 4.667*	*- / 0.975*	*- / 0.662*	*- / 0.337*	*- / -*	*- / 0.337*	*- / -*	*- / -*	*- / 0.355*	*- / -*	*- / 0.355*	*- / 7.351*
Installation												
Modification Item 1 of 1: DM013 - (MORIAH WIND SYSTEM)	- / 16.472	- / 4.718	- / 3.383	- / 2.856	- / 0.000	- / 2.856	- / 2.447	- / 1.167	- / 0.075	- / 0.750	- / 366.024	- / 397.892
Subtotal: Installation	*- / 16.472*	*- / 4.718*	*- / 3.383*	*- / 2.856*	*- / -*	*- / 2.856*	*- / 2.447*	*- / 1.167*	*- / 0.075*	*- / 0.750*	*- / 366.024*	*- / 397.892*
Total												
Total Cost (Procurement + Support + Installation)	**21.139**	**5.693**	**4.045**	**3.193**	**0.000**	**3.193**	**2.447**	**1.167**	**0.430**	**0.750**	**366.379**	**405.243**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 15 / DM013 - (MORIAH WIND SYSTEM)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM013 - (MORIAH WIND SYSTEM)

Manufacturer Information

Manufacturer Name: NAWCAD LAKEHURST	Manufacturer Location: LAKEHURST, NEW JERSEY
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jun 2023	Jun 2024			Jun 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025			Oct 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: MORIAH WIND SYSTEM EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 16.472	3 / 4.549	3 / 1.565	0 / 0.059	0 / 0.000	0 / 0.059	0 / 1.302	2 / 1.167	- / -	- / -	1 / 0.000	25 / 25.114
FY 2022	- / -	0 / 0.169	0 / 1.690	3 / 1.521	0 / 0.000	3 / 1.521	- / -	- / -	- / -	- / -	0 / 0.000	3 / 3.380
FY 2023	- / -	- / -	0 / 0.128	0 / 1.276	0 / 0.000	0 / 1.276	2 / 1.145	- / -	- / -	- / -	0 / 0.000	2 / 2.549
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 365.000	1 / 365.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.075	0 / 0.750	1 / 0.669	1 / 1.494
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.355	1 / 0.355
Total	16 / 16.472	3 / 4.718	3 / 3.383	3 / 2.856	0 / 0.000	3 / 2.856	2 / 2.447	2 / 1.167	0 / 0.075	0 / 0.750	4 / 366.024	33 / 397.892

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	16	1	2	-	-	1	-	-	2	1	-	1	1	-	-	-	2	-	-	2	-	-	-	-	-	-	-	-	-	4	33
Out	13	-	2	-	1	-	2	1	-	1	-	-	1	-	2	1	-	1	-	-	-	-	-	-	3	-	-	1	-	4	33

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 16 / DM013 - (IVCS UPGRADE)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	78.415	21.967	27.488	22.119	0.000	22.119	24.352	13.559	17.244	10.529	86.214	301.887
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	78.415	21.967	27.488	22.119	0.000	22.119	24.352	13.559	17.244	10.529	86.214	301.887
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**78.415**	**21.967**	**27.488**	**22.119**	**0.000**	**22.119**	**24.352**	**13.559**	**17.244**	**10.529**	**86.214**	**301.887**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures the AN/STC-3(V)3 Internal Voice Communication System that replaces the ship's existing obsolete telephone services system that provides voice communications between spaces in the ship, along with ship to shore services. Integrated Logistics Support includes development of ILS documentation, review and certification. Environmental Quality Testing includes Shock, Vibration and EMI certification to ensure IVCS meets survivability requirements.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 16 / DM013 - (IVCS UPGRADE)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM013 - (IVCS UPGRADE)												
B Kits												
Recurring												
1.1.1) IVCS EQUIPMENT - NonOrganic	15 / 29.455	3 / 8.487	3 / 8.639	1 / 2.932	- / -	1 / 2.932	2 / 5.969	- / -	2 / 6.186	2 / 6.297	10 / 30.930	38 / 98.895
Subtotal: Recurring	*- / 29.455*	*- / 8.487*	*- / 8.639*	*- / 2.932*	*- / -*	*- / 2.932*	*- / 5.969*	*- / -*	*- / 6.186*	*- / 6.297*	*- / 30.930*	*- / 98.895*
Subtotal: DM013 - (IVCS UPGRADE)	*15 / 29.455*	*3 / 8.487*	*3 / 8.639*	*1 / 2.932*	*- / -*	*1 / 2.932*	*2 / 5.969*	*- / -*	*2 / 6.186*	*2 / 6.297*	*10 / 30.930*	*38 / 98.895*
Subtotal: Procurement, All Modification Items	*- / 29.455*	*- / 8.487*	*- / 8.639*	*- / 2.932*	*- / -*	*- / 2.932*	*- / 5.969*	*- / -*	*- / 6.186*	*- / 6.297*	*- / 30.930*	*- / 98.895*
Installation												
Modification Item 1 of 1: DM013 - (IVCS UPGRADE)	- / 48.960	- / 13.480	- / 18.849	- / 19.187	- / 0.000	- / 19.187	- / 18.383	- / 13.559	- / 11.058	- / 4.232	- / 55.284	- / 202.992
Subtotal: Installation	*- / 48.960*	*- / 13.480*	*- / 18.849*	*- / 19.187*	*- / -*	*- / 19.187*	*- / 18.383*	*- / 13.559*	*- / 11.058*	*- / 4.232*	*- / 55.284*	*- / 202.992*
Total												
Total Cost (Procurement + Support + Installation)	**78.415**	**21.967**	**27.488**	**22.119**	**0.000**	**22.119**	**24.352**	**13.559**	**17.244**	**10.529**	**86.214**	**301.887**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 16 / DM013 - (IVCS UPGRADE)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM013 - (IVCS UPGRADE)

Manufacturer Information

Manufacturer Name: Naval Information Warfare Center Atlantic	Manufacturer Location: Charleston, SC
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jun 2023	Jun 2024	Jun 2025		Jun 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026		Oct 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: IVCS EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	9 / 48.960	2 / 12.603	3 / 13.846	0 / 0.307	0 / 0.000	0 / 0.307	0 / 1.420	1 / 4.704	- / -	- / -	0 / 0.000	15 / 81.840
FY 2022	- / -	0 / 0.877	0 / 4.052	3 / 14.105	0 / 0.000	3 / 14.105	- / -	- / -	- / -	- / -	0 / 0.000	3 / 19.034
FY 2023	- / -	- / -	0 / 0.951	0 / 4.396	0 / 0.000	0 / 4.396	3 / 14.537	- / -	- / -	- / -	0 / 0.000	3 / 19.884
FY 2024	- / -	- / -	- / -	0 / 0.379	0 / 0.000	0 / 0.379	0 / 1.750	1 / 5.729	- / -	- / -	0 / 0.000	1 / 7.858
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.676	0 / 3.126	2 / 10.278	- / -	0 / 0.000	2 / 14.080
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.780	0 / 3.596	2 / 11.731	2 / 16.107
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.636	1 / 12.623	2 / 13.259
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 30.930	10 / 30.930
Total	9 / 48.960	2 / 13.480	3 / 18.849	3 / 19.187	0 / 0.000	3 / 19.187	3 / 18.383	2 / 13.559	2 / 11.058	1 / 4.232	13 / 55.284	38 / 202.992

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	9	1	1	-	-	1	1	-	1	1	-	2	-	-	-	-	3	-	1	1	-	-	1	-	1	-	-	1	-	13	38
Out	7	1	-	1	1	1	1	-	-	-	1	1	-	-	2	-	-	1	-	-	-	-	-	-	3	-	-	1	-	17	38

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 17 / DM013 - Slewing Arm Davit (SLAD)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	9.251	2.764	2.802	1.491	0.000	1.491	2.175	0.571	1.933	1.595	98.723	121.305
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	9.251	2.764	2.802	1.491	0.000	1.491	2.175	0.571	1.933	1.595	98.723	121.305
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**9.251**	**2.764**	**2.802**	**1.491**	**0.000**	**1.491**	**2.175**	**0.571**	**1.933**	**1.595**	**98.723**	**121.305**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Procures Slewing Arm Davit (SLAD) that replaces current SLAD with an all-electric davit, leveraging the current Navy Standard SLAD design. Legacy system has documented reliability and maintenance issues.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 17 / DM013 - Slewing Arm Davit (SLAD)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM013 - Slewing Arm Davit (SLAD)												
B Kits												
Recurring												
1.1.1) SLAD EQUIPMENT - NonOrganic	15 / 6.908	3 / 1.968	3 / 2.003	1 / 0.680	- / -	1 / 0.680	2 / 1.384	- / -	2 / 1.434	2 / 1.460	10 / 71.700	38 / 87.537
Subtotal: Recurring	*- / 6.908*	*- / 1.968*	*- / 2.003*	*- / 0.680*	*- / -*	*- / 0.680*	*- / 1.384*	*- / -*	*- / 1.434*	*- / 1.460*	*- / 71.700*	*- / 87.537*
Subtotal: DM013 - Slewing Arm Davit (SLAD)	*15 / 6.908*	*3 / 1.968*	*3 / 2.003*	*1 / 0.680*	*- / -*	*1 / 0.680*	*2 / 1.384*	*- / -*	*2 / 1.434*	*2 / 1.460*	*10 / 71.700*	*38 / 87.537*
Subtotal: Procurement, All Modification Items	*- / 6.908*	*- / 1.968*	*- / 2.003*	*- / 0.680*	*- / -*	*- / 0.680*	*- / 1.384*	*- / -*	*- / 1.434*	*- / 1.460*	*- / 71.700*	*- / 87.537*
Installation												
Modification Item 1 of 1: DM013 - Slewing Arm Davit (SLAD)	- / 2.343	- / 0.796	- / 0.799	- / 0.811	- / 0.000	- / 0.811	- / 0.791	- / 0.571	- / 0.499	- / 0.135	- / 27.023	- / 33.768
Subtotal: Installation	*- / 2.343*	*- / 0.796*	*- / 0.799*	*- / 0.811*	*- / -*	*- / 0.811*	*- / 0.791*	*- / 0.571*	*- / 0.499*	*- / 0.135*	*- / 27.023*	*- / 33.768*
Total												
Total Cost (Procurement + Support + Installation)	**9.251**	**2.764**	**2.802**	**1.491**	**0.000**	**1.491**	**2.175**	**0.571**	**1.933**	**1.595**	**98.723**	**121.305**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 17 / DM013 - Slewing Arm Davit (SLAD)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM013 - Slewing Arm Davit (SLAD)

Manufacturer Information

Manufacturer Name: NSWC SSES	Manufacturer Location: Philadelphia, PA
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jun 2023	Jun 2024	Jun 2025		Jun 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026		Oct 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: SLAD EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	9 / 2.343	2 / 0.762	3 / 0.638	0 / 0.012	0 / 0.000	0 / 0.012	0 / 0.044	1 / 0.216	- / -	- / -	0 / 0.000	15 / 4.015
FY 2022	- / -	0 / 0.034	0 / 0.124	3 / 0.649	0 / 0.000	3 / 0.649	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.807
FY 2023	- / -	- / -	0 / 0.037	0 / 0.135	0 / 0.000	0 / 0.135	3 / 0.667	- / -	- / -	- / -	0 / 0.660	3 / 1.499
FY 2024	- / -	- / -	- / -	0 / 0.015	0 / 0.000	0 / 0.015	0 / 0.054	1 / 0.259	- / -	- / -	0 / 0.000	1 / 0.328
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.026	0 / 0.096	2 / 0.469	- / -	0 / 0.000	2 / 0.591
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.030	0 / 0.110	2 / 0.529	2 / 0.669
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.025	1 / 0.534	2 / 0.559
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 25.300	10 / 25.300
Total	9 / 2.343	2 / 0.796	3 / 0.799	3 / 0.811	0 / 0.000	3 / 0.811	3 / 0.791	2 / 0.571	2 / 0.499	1 / 0.135	13 / 27.023	38 / 33.768

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	9	1	1	-	-	1	1	-	1	1	-	2	-	-	-	-	3	-	1	1	-	-	1	-	1	-	-	1	-	13	38
Out	6	-	1	-	2	-	2	-	-	-	1	1	-	-	2	1	-	1	-	-	-	-	-	-	3	-	-	1	-	17	38

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 18 / DM013 - AN/SPA-25H
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	6.963	2.191	2.171	1.855	0.000	1.855	1.692	1.134	0.660	1.632	45.137	63.435
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	6.963	2.191	2.171	1.855	0.000	1.855	1.692	1.134	0.660	1.632	45.137	63.435
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**6.963**	**2.191**	**2.171**	**1.855**	**0.000**	**1.855**	**1.692**	**1.134**	**0.660**	**1.632**	**45.137**	**63.435**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Procures AN/SPA-25H Radar Indicator Group that replaces the legacy AN/SPA-25G

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 18 / DM013 - AN/SPA-25H
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM013 - AN/SPA-25H												
B Kits												
Recurring												
1.1.1) AN/SPA-25H EQUIPMENT - NonOrganic	14 / 3.037	3 / 0.602	3 / 0.613	1 / 0.208	- / -	1 / 0.208	2 / 0.424	- / -	2 / 0.439	2 / 0.447	10 / 21.950	37 / 27.720
Subtotal: Recurring	*- / 3.037*	*- / 0.602*	*- / 0.613*	*- / 0.208*	*- / -*	*- / 0.208*	*- / 0.424*	*- / -*	*- / 0.439*	*- / 0.447*	*- / 21.950*	*- / 27.720*
Subtotal: DM013 - AN/SPA-25H	*14 / 3.037*	*3 / 0.602*	*3 / 0.613*	*1 / 0.208*	*- / -*	*1 / 0.208*	*2 / 0.424*	*- / -*	*2 / 0.439*	*2 / 0.447*	*10 / 21.950*	*37 / 27.720*
Subtotal: Procurement, All Modification Items	*- / 3.037*	*- / 0.602*	*- / 0.613*	*- / 0.208*	*- / -*	*- / 0.208*	*- / 0.424*	*- / -*	*- / 0.439*	*- / 0.447*	*- / 21.950*	*- / 27.720*
Installation												
Modification Item 1 of 1: DM013 - AN/SPA-25H	- / 3.926	- / 1.589	- / 1.558	- / 1.647	- / 0.000	- / 1.647	- / 1.268	- / 1.134	- / 0.221	- / 1.185	- / 23.187	- / 35.715
Subtotal: Installation	*- / 3.926*	*- / 1.589*	*- / 1.558*	*- / 1.647*	*- / -*	*- / 1.647*	*- / 1.268*	*- / 1.134*	*- / 0.221*	*- / 1.185*	*- / 23.187*	*- / 35.715*
Total												
Total Cost (Procurement + Support + Installation)	**6.963**	**2.191**	**2.171**	**1.855**	**0.000**	**1.855**	**1.692**	**1.134**	**0.660**	**1.632**	**45.137**	**63.435**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 18 / DM013 - AN/SPA-25H
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DM013 - AN/SPA-25H

Manufacturer Information

Manufacturer Name: CDSA DAM NECK	Manufacturer Location: DAM NECK, VA
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 16

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jun 2023	Jun 2024	Jun 2025		Jun 2027	
Delivery Dates	Oct 2023	Oct 2024	Oct 2025	Oct 2026		Oct 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: AN/SPA-25H EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	9 / 3.926	2 / 1.511	2 / 0.203	0 / 0.027	0 / 0.000	0 / 0.027	0 / 0.445	1 / 0.069	- / -	- / -	0 / 0.000	14 / 6.181
FY 2022	- / -	0 / 0.078	0 / 1.271	3 / 0.207	0 / 0.000	3 / 0.207	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.556
FY 2023	- / -	- / -	0 / 0.084	0 / 1.379	0 / 0.000	0 / 1.379	3 / 0.214	- / -	- / -	- / -	0 / 0.000	3 / 1.677
FY 2024	- / -	- / -	- / -	0 / 0.034	0 / 0.000	0 / 0.034	0 / 0.549	1 / 0.085	- / -	- / -	0 / 0.000	1 / 0.668
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.060	0 / 0.980	2 / 0.152	- / -	0 / 0.000	2 / 1.192
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.069	0 / 1.128	2 / 0.174	2 / 1.371
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.057	1 / 1.063	2 / 1.120
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 21.950	10 / 21.950
Total	9 / 3.926	2 / 1.589	2 / 1.558	3 / 1.647	0 / 0.000	3 / 1.647	3 / 1.268	2 / 1.134	2 / 0.221	1 / 1.185	13 / 23.187	37 / 35.715

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	9	1	1	-	-	1	1	-	-	1	-	2	-	-	-	-	3	-	1	1	-	-	1	-	1	-	-	1	-	13	37
Out	6	-	1	-	2	1	1	-	-	-	1	1	-	-	2	-	-	1	-	-	-	-	-	-	3	-	-	1	-	17	37

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 19 / DM014 SOLID STATE RADAR EQUIPMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	173.520	183.136	0.000	183.136	379.109	441.716	502.114	565.997	6,774.118	9,019.710
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	173.520	183.136	0.000	183.136	379.109	441.716	502.114	565.997	6,774.118	9,019.710
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**173.520**	**183.136**	**0.000**	**183.136**	**379.109**	**441.716**	**502.114**	**565.997**	**6,774.118**	**9,019.710**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

SPY-6 solid-state radar will provide the latest capability to the DDG-51 Class for Air Defense and Ballistic Missile Defense. SPY-6 will be applicable to DDG 91 to 124 & 127 by replacing legacy SPY-1 radar arrays with SPY-6 arrays to deliver AEGIS Baseline 10. Baseline 10 will build upon Baseline 9 hardware and software design. SPY-6 fielding plans are integrated with SEWIP BLK III (BLI 2312) in order to rapidly deliver enhanced capability to the DDG-51 Class required to pace new threats by international competitors.

Engineering Services:

Costs for FY23-FY26 include Non-Recurring Engineering (NRE) requirements for further analysis and design efforts associated with integrating SPY-6 with systems on in-service DDG-51 Class ships. Upgrades require significant redesign of existing shipboard power, cooling, dry-air systems in order to achieve successful integration. Costs include Modeling & Simulation, Technical Data Package formulation, First Article Qualification and Environmental Testing, Software Modifications and Land Based Testing prior to shipboard installation.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 19 / DM014 SOLID STATE RADAR EQUIPMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DM014 SOLID STATE RADAR EQUIPMENT												
B Kits												
Recurring												
1.1.1) DM014 - SOLID STATE RADAR EQUIPMENT - NonOrganic	- / -	- / -	1 / 143.320	1 / 146.186	- / -	1 / 146.186	2 / 298.220	2 / 304.185	2 / 310.268	2 / 316.474	10 / 3,099.540	20 / 4,618.193
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 143.320*	*- / 146.186*	*- / -*	*- / 146.186*	*- / 298.220*	*- / 304.185*	*- / 310.268*	*- / 316.474*	*- / 3,099.540*	*- / 4,618.193*
Subtotal: DM014 SOLID STATE RADAR EQUIPMENT	*- / -*	*- / -*	*1 / 143.320*	*1 / 146.186*	*- / -*	*1 / 146.186*	*2 / 298.220*	*2 / 304.185*	*2 / 310.268*	*2 / 316.474*	*10 / 3,099.540*	*20 / 4,618.193*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / 143.320*	*- / 146.186*	*- / -*	*- / 146.186*	*- / 298.220*	*- / 304.185*	*- / 310.268*	*- / 316.474*	*- / 3,099.540*	*- / 4,618.193*
Support *(All Modification Items)*												
2.1) ENGINEERING SERVICES	- / -	- / -	- / 30.200	- / 33.804	- / -	- / 33.804	- / 24.480	- / 24.970	- / 21.684	- / 22.118	- / -	- / 157.256
Subtotal: Support	*- / 0.000*	*- / -*	*- / 30.200*	*- / 33.804*	*- / -*	*- / 33.804*	*- / 24.480*	*- / 24.970*	*- / 21.684*	*- / 22.118*	*- / 0.000*	*- / 157.256*
Installation												
Modification Item 1 of 1: DM014 SOLID STATE RADAR EQUIPMENT	- / 0.000	- / 0.000	- / 0.000	- / 3.146	- / 0.000	- / 3.146	- / 56.409	- / 112.561	- / 170.162	- / 227.405	- / 3,674.578	- / 4,244.261
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 3.146*	*- / -*	*- / 3.146*	*- / 56.409*	*- / 112.561*	*- / 170.162*	*- / 227.405*	*- / 3,674.578*	*- / 4,244.261*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**173.520**	**183.136**	**0.000**	**183.136**	**379.109**	**441.716**	**502.114**	**565.997**	**6,774.118**	**9,019.710**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0900 / DDG Mod	**Modification Number / Title:** 19 / DM014 SOLID STATE RADAR EQUIPMENT

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: DM014 SOLID STATE RADAR EQUIPMENT

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: New MFG - Loc

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 36

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Apr 2023	Apr 2024	Apr 2025	Apr 2026	Apr 2027	
Delivery Dates		Apr 2026	Apr 2027	Apr 2028	Apr 2029	Apr 2030	

Installation Information

Method of Implementation: [none specified]:: Installation Name: DM014 - SOLID STATE RADAR EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 3.146	0 / 0.000	0 / 3.146	0 / 53.200	1 / 51.750	- / -	- / -	0 / 0.000	1 / 108.096
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.209	0 / 54.264	1 / 52.785	- / -	0 / 0.000	1 / 110.258
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 6.547	0 / 110.699	2 / 107.681	0 / 0.000	2 / 224.927
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 6.678	0 / 112.913	2 / 109.835	2 / 229.426
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 6.811	2 / 227.203	2 / 234.014
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 238.000	2 / 238.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 3,099.540	10 / 3,099.540
Total	- / -	- / -	- / -	0 / 3.146	0 / 0.000	0 / 3.146	0 / 56.409	1 / 112.561	1 / 170.162	2 / 227.405	16 / 3,674.578	20 / 4,244.261

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	1	1	-	16	20
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	167.878	13.970	18.552	34.782	0.000	34.782	37.681	36.957	43.539	42.369	239.323	635.051
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	167.878	13.970	18.552	34.782	0.000	34.782	37.681	36.957	43.539	42.369	239.323	635.051
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**167.878**	**13.970**	**18.552**	**34.782**	**0.000**	**34.782**	**37.681**	**36.957**	**43.539**	**42.369**	**239.323**	**635.051**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Department decided that a number of survivability improvements needed to be incorporated into mission-essential ship and combat systems during their acquisition and modernization. Shipboard fires have emphasized the urgent need to upgrade features and design standards that contribute to survivability.

The FY2024 funding request shows an increase of $16.230 million due to a cost increase ($7.017 million) in HB002 MAGAZINE SPRINKLING IMPROVEMENT installations (four in FY 2023 to eight in FY 2024), a cost increase ($4.871 million) in HB011 L2AB FIREFIGHTING PROGRAMS, a cost increase ($3.147 million) in HB007 SOPV REPLACEMENT installations (five in FY 2023 to eight in FY 2024), a cost increase ($1.947 million) in HB010 DAMAGE CONTROL UPGRADES, a cost decrease (-$0.313 million) in HB003 EEBD REPLACEMENT installations (one in FY 2023 to zero in FY 2024), and a cost decrease (-$0.439 million) in HB830 PRODUCTION ENGINEERING.

[P40A / HB003 - EMERGENCY ESCAPE BREATHING DEVICE (EEBD)]: Emergency Escape Breathing Device (EEBD) breathing apparatus for firefighters are reaching their service life of 15 years and must be replaced. EEBDs address a high priority CNO effort to replace expired breathing equipment aboard ships throughout the Fleet. The requirement for this capability has been validated by the experience of numerous shipboard casualties. EEBD replacement is required to ensure that ships will deploy with operational safety equipment on-board to allow for emergency escape from shipboard fires.

[P40A / HB010 - DAMAGE CONTROL UPGRADES]: Increase of $1.947 million due to the re-alignment of damage control firefighting equipment procurement under OPN-8 Spares to the correct OPN LI 0910. Damage Control Upgrades provides rapid assessments and initial outfitting (within a year) for new capabilities or obsolescence.

[P40A / L2AB FIREFIGHTING PROGRAMS]: Increase of $4.871 million in FY2024 resulting from findings of the Major Fires Review and BONHOMME RICHARD fire investigation recommendations as validated by VCNO in the Learning to Action Board (L2AB). Following the USS Bonhomme Richard fire, the L2AB was stood up to pursue solutions to damage control and firefighting. This program funds critical efforts in shipboard fire detection/suppression systems, fire prevention features, and advanced firefighting equipment; track programs to completion.

[P40A / HB830 - PRODUCTION ENGINEERING (PE)]: PE includes development of technical manuals, Planned Maintenance System (PMS), Provisioning Technical Documentation (PTD), Program Support Data (PSD) and Allowance Parts List (APLs), engineering to manage procurement and material support of design reviews, and program management.

[P3A / HB002 - MAGAZINE SPRINKLING IMPROVEMENT]: Replaces the detection system designed in the 1960s which has performance deficiencies and is difficult to support and maintain. Replacement includes the Fire Detection and Actuation System (FDAS) and the Motor-Operated Pilot Valves (MOPV). When the FDAS detects a fire, the MOPV opens to provide the sprinkling for the magazine. The

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

FDAS consists of heat detectors, smoke detectors for amphibious ships, and associated controls. MOPV is the same item procured under HB007 - SOPV Replacement. FDAS/MOPV provides increased fire performance and reduced lifecycle and logistics costs.

[P3A - 2 / HB007 - SOPV REPLACEMENT]: The Solenoid Operated Pilot Valve (SOPV) provides a way for remote control of the Aqueous Film Forming Foam (AFFF) and Countermeasure Wash Down (CMWD) systems. Existing SOPVs are unreliable, costly to repair, and produce the longest downtime for the AFFF system. Top Management Attention/Top Management Initiative (TMA/TMI) and INSURV interest due to impact of this item on AFFF system operation. Replacement of the SOPV with the Motor Operated Pilot Valve (MOPV) is required to ensure these systems are operational for emergencies. MOPV has a 50 year service life and will provide a significant reduction in preventative maintenance and cost.

[P3A - 3 / HB008 - SCBA REPLACEMENT]: Self-Contained Breathing Apparatus (SCBA) is a compressed air breathing device compatible with a firefighter's protective wear and helmet, and other damage control equipment. The SCBA are reaching the end of their service life of 15 years and are being replaced with 30 year cylinders. SCBA replacement is required to ensure that ships will deploy with operational safety equipment on-board to provide breathable air while fighting shipboard fires.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	**Title***	**Subexhibits**	**ID CD**	**MDAP/ MAIS Code**	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-40a	Firefighting Equipment	P-5a			- / 56.651	- / 0.175	- / 2.280	- / 8.346	- / -	- / 8.346
P-3a	1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT (FDAS/MOPV Installation)				- / 22.865	- / 6.471	- / 9.109	- / 16.126	- / 0.000	- / 16.126
P-3a	2 / HB007 - SOPV REPLACEMENT (SOPV REPLACEMENT)				- / 14.624	- / 1.310	- / 7.163	- / 10.310	- / 0.000	- / 10.310
P-3a	3 / HB008 - SCBA REPLACEMENT (SCBA REPLACEMENT)				- / 73.738	- / 6.014	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 167.878**	**- / 13.970**	**- / 18.552**	**- / 34.782**	**- / 0.000**	**- / 34.782**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	**Title***	**Subexhibits**	**ID CD**	**MDAP/ MAIS Code**	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-40a	Firefighting Equipment	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT (FDAS/MOPV Installation)				- / 20.336	- / 17.211	- / 21.408	- / 24.408	- / 104.871	- / 242.805
P-3a	2 / HB007 - SOPV REPLACEMENT (SOPV REPLACEMENT)				- / 11.270	- / 8.476	- / 11.842	- / 11.096	- / 72.393	- / 148.484
P-3a	3 / HB008 - SCBA REPLACEMENT (SCBA REPLACEMENT)				- / 0.000	- / 4.949	- / 0.000	- / 0.000	- / 0.000	- / 84.701
P-40	**Total Gross/Weapon System Cost**				**- / 37.681**	**- / 36.957**	**- / 43.539**	**- / 42.369**	**- / 239.323**	**- / 635.051**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Aggregated Items Title:** Firefighting Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) HB003 - EMERGENCY ESCAPE BREATHING DEVICE (EEBD) (1)																				
1.1) EEBD REPLACEMENT(†)	A		288,333.33	132	38.060	-	-	-	313,000.00	1	0.313	-	-	-	-	-	-	-	-	-
Subtotal: 1) HB003 - EMERGENCY ESCAPE BREATHING DEVICE (EEBD)			**-**	**-**	***38.060***	**-**	**-**	**-**	**-**	**-**	***0.313***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) HB010 - DAMAGE CONTROL UPGRADES (2)																				
2.1) DAMAGE CONTROL UPGRADES	A		-	-	-	-	-	-	-	-	-	-	-	1.947	-	-	-	-	-	1.947
Subtotal: 2) HB010 - DAMAGE CONTROL UPGRADES			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***1.947***	**-**	**-**	**-**	**-**	**-**	***1.947***
3) HB011 - L2AB FIREFIGHTING PROGRAMS																				
3.1) L2AB FIREFIGHTING PROGRAMS (3)	A		-	-	-	-	-	-	-	-	-	-	-	4.871	-	-	-	-	-	4.871
Subtotal: 3) HB011 - L2AB FIREFIGHTING PROGRAMS			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***4.871***	**-**	**-**	**-**	**-**	**-**	***4.871***
4) HB830 - PRODUCTION ENGINEERING (PE) (4)																				
4.1) PRODUCTION ENGINEERING	A		-	-	18.591	-	-	0.175	-	-	1.967	-	-	1.528	-	-	-	-	-	1.528
Subtotal: 4) HB830 - PRODUCTION ENGINEERING (PE)			**-**	**-**	***18.591***	**-**	**-**	***0.175***	**-**	**-**	***1.967***	**-**	**-**	***1.528***	**-**	**-**	**-**	**-**	**-**	***1.528***
Total			**-**	**-**	**56.651**	**-**	**-**	**0.175**	**-**	**-**	**2.280**	**-**	**-**	**8.346**	**-**	**-**	**-**	**-**	**-**	**8.346**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(1) The P40 unit costs are identified as costs per ship for EEBD. Unit costs can vary based on the distribution of ship classes planned during each FY, quantities per ship class, and the ship port location. Requirement is for CG-47, DDG-51 (Flight I, II, IIA), LCS-1, LCS-2, LHD-1, LSD-41, LSD-49, MCM-1, and PC-1 ship classes. PROCUREMENT: Funding includes the breathing apparatus hardware, shipping, and distribution to ships. FY 2023 procurement costs are in support of one (1) OCONUS DDG 0051 Flight IIA ship ($0.313M). There are no installations scheduled in FY 2024. EEBD 15 year cycle replacement will re-start in FY 2025.

(2) Increase of $1.947 million due to the re-alignment of damage control firefighting equipment procurement under OPN-8 Spares to the correct OPN LI 0910. Damage Control Upgrades provides rapid assessments and initial outfitting (within a year) for new capabilities or obsolescence.

(3) Increase of $4.871 million in FY2024 resulting from findings of the Major Fires Review and BONHOMME RICHARD fire investigation recommendations as validated by VCNO in the Learning to Action Board (L2AB). Following the USS Bonhomme Richard fire, the L2AB was stood up to pursue solutions to damage control and firefighting. This program funds critical efforts in shipboard fire detection/suppression systems, fire prevention features, and advanced firefighting equipment; track programs to completion.

(4) PE costs are calculated for each FY based on the fielding plan distribution and installation level of effort for each FY. Decrease of $0.439 million from FY 2023 to FY 2024 due to cost variability with ship class, ship port location, and quantities of installations. There are no EEBD installations in FY 2024.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Aggregated Items: Firefighting Equipment

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) HB003 - EMERGENCY ESCAPE BREATHING DEVICE (EEBD)												
1.1) EEBD REPLACEMENT		2023	OCENCO / PLEASANT PRAIRIE, WI	SS / FFP	NSWC, PCD	Jan 2023	May 2023	1	313,000.00	Y		

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	22.865	6.471	9.109	16.126	0.000	16.126	20.336	17.211	21.408	24.408	104.871	242.805
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	22.865	6.471	9.109	16.126	0.000	16.126	20.336	17.211	21.408	24.408	104.871	242.805
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**22.865**	**6.471**	**9.109**	**16.126**	**0.000**	**16.126**	**20.336**	**17.211**	**21.408**	**24.408**	**104.871**	**242.805**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Replaces the detection system designed in the 1960s which has performance deficiencies and is difficult to support and maintain. Replacement includes the Fire Detection and Actuation System (FDAS) and the Motor-Operated Pilot Valves (MOPV). When the FDAS detects a fire, the MOPV opens to provide the sprinkling for the magazine. The FDAS consists of heat detectors, smoke detectors for amphibious ships, and associated controls. MOPV is the same item procured under HB007 - SOPV Replacement. FDAS/MOPV provides increased fire performance and reduced lifecycle and logistics costs.

Procurement costs shown are based on new hardware contract award estimates (HB002/HB007) and actual installation costs from prior years . Installation costs shown are weighted and will vary based on ship class, ship port location, and installation availability.

Quantities are number of ships.

Requirement is for all CG 0047, DDG 0051, LHA 0006, LHD 0001, LPD 0017, LSD 0041/0049 ship classes.

PROCUREMENT: Procurement costs include FDAS and MOPV equipment, shipping, and distribution to ship. FDAS/MOPV procurement costs can vary significantly by ship class, and quantity and/or size of the magazines. DDG-51 ships already have smoke detectors. PROCUREMENT costs are budgeted in the FY prior to equipment installation starting in FY 2021. PROCUREMENT costs may be budgeted in the same FY as installation based on installation schedule variation.

INSTALLATION: Funding includes all costs associated with the Fleet Modernization Program Magazine Sprinkling Improvement Design Support Allocation (DSA) and equipment installations onboard ships. DSA costs are budgeted in the FY prior to equipment installation starting in FY2021. FDAS/MOPV installation costs can vary significantly by ship class, ship port location, and ship installation availability. DSA costs may be budgeted in the same FY as installation based on installation schedule variation.

FY 2024 procurement costs are in support of four (4) DDG 0051 Flight IIA ships (average $0.378M); three (3) DDG 0051 Flight I/II ships (average $0.186M) and one (1) LPD 0017 ship ($0.488M) for a program total of $2.557M.

FY 2024 installation support services costs include are in support of seven (7) DDG 0051 Flight I/II/IIA ships (average $1.25M); one (1) LPD 0017 ship ($1.56M) and DSA ($3.084M) for a program total of $13.569M. Installation costs shown are weighted and will vary based on ship class, ship port location, and installation availability.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

FY2024 procurement funding request shows an increase of $0.979M due to increasing the number of procurements from 4 to 8. FY2024 installation funding request shows an increase of $5.542M due to increasing the number of installations from 4 to 8.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: N/A	**Modification Type:** FDAS/MOPV Installation	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: HB002 - MAGAZINE SPRINKLING IMPROVEMENT												
B Kits												
Recurring												
1.1.1) HB002 - MAGAZINE SPRINKLING IMPROVEMENT HW - NonOrganic (5)	16 / 4.804	2 / 0.302	4 / 1.905	8 / 2.557	- / -	8 / 2.557	8 / 2.802	8 / 2.540	8 / 4.707	12 / 0.607	32 / 20.007	98 / 40.231
Subtotal: Recurring	*- / 4.804*	*- / 0.302*	*- / 1.905*	*- / 2.557*	*- / -*	*- / 2.557*	*- / 2.802*	*- / 2.540*	*- / 4.707*	*- / 0.607*	*- / 20.007*	*- / 40.231*
Subtotal: HB002 - MAGAZINE SPRINKLING IMPROVEMENT	*16 / 4.804*	*2 / 0.302*	*4 / 1.905*	*8 / 2.557*	*- / -*	*8 / 2.557*	*8 / 2.802*	*8 / 2.540*	*8 / 4.707*	*12 / 0.607*	*32 / 20.007*	*98 / 40.231*
Subtotal: Procurement, All Modification Items	*- / 4.804*	*- / 0.302*	*- / 1.905*	*- / 2.557*	*- / -*	*- / 2.557*	*- / 2.802*	*- / 2.540*	*- / 4.707*	*- / 0.607*	*- / 20.007*	*- / 40.231*
Installation												
Modification Item 1 of 1: HB002 - MAGAZINE SPRINKLING IMPROVEMENT	- / 18.061	- / 6.169	- / 7.204	- / 13.569	- / 0.000	- / 13.569	- / 17.534	- / 14.671	- / 16.701	- / 23.801	- / 84.864	- / 202.574
Subtotal: Installation	*- / 18.061*	*- / 6.169*	*- / 7.204*	*- / 13.569*	*- / -*	*- / 13.569*	*- / 17.534*	*- / 14.671*	*- / 16.701*	*- / 23.801*	*- / 84.864*	*- / 202.574*
Total												
Total Cost (Procurement + Support + Installation)	**22.865**	**6.471**	**9.109**	**16.126**	**0.000**	**16.126**	**20.336**	**17.211**	**21.408**	**24.408**	**104.871**	**242.805**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: HB002 - MAGAZINE SPRINKLING IMPROVEMENT

Manufacturer Information

Manufacturer Name: Marotta (6) | Manufacturer Location: Monteville NJMonteville NJ

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Feb 2022	Feb 2023	Feb 2024	Feb 2025	Feb 2026	Feb 2027	Feb 2028
Delivery Dates	Oct 2022	Oct 2023	Oct 2024	Oct 2025	Oct 2026	Oct 2027	Oct 2028

Manufacturer Name: DLA | Manufacturer Location: New MFG - LocN/A

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Feb 2022	Feb 2023	Feb 2024	Feb 2025	Feb 2026	Feb 2027	Feb 2028
Delivery Dates	Oct 2022	Oct 2023	Oct 2024	Oct 2025	Oct 2026	Oct 2027	Oct 2028

Installation Information

Method of Implementation: SHIPALT/DSA:: Installation Name: HB002 - MAGAZINE SPRINKLING IMPROVEMENT HW

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 18.061	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 18.061
FY 2022	- / -	2 / 6.169	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 6.169
FY 2023	- / -	- / -	4 / 7.204	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 7.204
FY 2024	- / -	- / -	- / -	8 / 13.569	0 / 0.000	8 / 13.569	- / -	- / -	- / -	- / -	0 / 0.000	8 / 13.569
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	8 / 17.534	- / -	- / -	- / -	0 / 0.000	8 / 17.534
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 14.671	- / -	- / -	0 / 0.000	8 / 14.671
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 16.701	- / -	0 / 0.000	8 / 16.701
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 23.801	0 / 0.000	12 / 23.801
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 84.864	32 / 84.864
Total	16 / 18.061	2 / 6.169	4 / 7.204	8 / 13.569	0 / 0.000	8 / 13.569	8 / 17.534	8 / 14.671	8 / 16.701	12 / 23.801	32 / 84.864	98 / 202.574

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: HB002 - MAGAZINE SPRINKLING IMPROVEMENT

Installation Information

Method of Implementation: SHIPALT/DSA:: Installation Name: HB002 - MAGAZINE SPRINKLING IMPROVEMENT HW

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	16	-	-	2	-	-	-	4	-	-	-	8	-	-	-	8	-	-	-	8	-	-	-	8	-	-	-	12	-	32	98
Out	10	2	2	2	2	-	-	-	2	2	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	42	98

Footnotes:

(5) FY2023 installation quantity decrease from five to four due to $1.135M decrease in installation funding. FY2024 procurement funding request shows an increase of $0.979M due to increasing the number of procurements from 4 to 8. FY2024 installation funding request shows an increase of $5.542M due to increasing the number of installations from 4 to 8.

(6) Same contract for HB007 hardware requirements.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 2 / HB007 - SOPV REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	14.624	1.310	7.163	10.310	0.000	10.310	11.270	8.476	11.842	11.096	72.393	148.484
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	14.624	1.310	7.163	10.310	0.000	10.310	11.270	8.476	11.842	11.096	72.393	148.484
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**14.624**	**1.310**	**7.163**	**10.310**	**0.000**	**10.310**	**11.270**	**8.476**	**11.842**	**11.096**	**72.393**	**148.484**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Solenoid Operated Pilot Valve (SOPV) provides a way for remote control of the Aqueous Film Forming Foam (AFFF) and Countermeasure Wash Down (CMWD) systems. Existing SOPVs are unreliable, costly to repair, and produce the longest downtime for the AFFF system. Top Management Attention/Top Management Initiative (TMA/TMI) and INSURV interest due to impact of this item on AFFF system operation. Replacement of the SOPV with the Motor Operated Pilot Valve (MOPV) is required to ensure these systems are operational for emergencies. MOPV has a 50 year service life and will provide a significant reduction in preventative maintenance and lifecycle cost.

Procurement costs shown are based on new hardware contract award estimates (HB002/HB007) and actual installation costs from prior years. Installation costs shown are weighted and will vary based on ship class, ship port location, and installation availability.

Quantities are number of ships.

Requirement is for CG 0047, DDG 0051, LHA 0006, LHD 0001, LPD 0017 ship classes.

PROCUREMENT: Costs include MOPV equipment, shipping, and distribution to ship. SOPV procurement costs vary significantly based on ship class. PROCUREMENT costs are budgeted in the FY prior to equipment installation starting in FY2021, concurrence from OPNAV N95/N96. PROCUREMENT costs may be budgeted in the same FY as installation based on installation schedule variation.

INSTALLATION: Funding includes all costs associated with the Fleet Modernization Program SOPV replacement Design Support Allocation (DSA) and equipment installations onboard ships. DSA costs are budgeted in the FY prior to equipment installation. SOPV installation costs vary significantly based on ship class, ship port location, and ship installation availability type. DSA costs may be budgeted in the same FY as installation based on installation schedule variation.

FY 2024 procurement costs are in support of six (6) DDG 0051 Flight II/IIA CONUS ships (average $0.330M); one (1) DDG 0051 Flight I CONUS ship ($0.268M) and one (1) LPD 0017 CONUS ship ($1.339M) for a program total of $3.915M.

FY 2024 installation costs are in support of eight (8) DDG 0051 Flight I/II/IIA CONUS ships (average $0.636M) and DSA ($1.300M) for a program total of $6.395M.

FY2024 procurement funding request shows an increase of $0.740M due to increasing the number of procurements from 5 to 8. FY2024 installation funding request shows an increase of $2.407M due to increasing the number of installations from 5 to 8.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 2 / HB007 - SOPV REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: N/A	**Modification Type:** SOPV REPLACEMENT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: HB007 - SOPV REPLACEMENT												
B Kits												
Recurring												
1.1.1) HB007 - SOPV REPLACEMENT HW - NonOrganic (7)	15 / 5.731	1 / 0.300	5 / 3.175	8 / 3.915	- / -	8 / 3.915	9 / 3.591	8 / 2.054	6 / 5.884	14 / 0.355	33 / 31.619	99 / 56.624
1.1.2) SOPV REPLACEMENT FIRST ARTICLES/ TESTING - Organic	- / 0.567	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.567
Subtotal: Recurring	*- / 6.298*	*- / 0.300*	*- / 3.175*	*- / 3.915*	*- / -*	*- / 3.915*	*- / 3.591*	*- / 2.054*	*- / 5.884*	*- / 0.355*	*- / 31.619*	*- / 57.191*
Subtotal: HB007 - SOPV REPLACEMENT	*15 / 6.298*	*1 / 0.300*	*5 / 3.175*	*8 / 3.915*	*- / -*	*8 / 3.915*	*9 / 3.591*	*8 / 2.054*	*6 / 5.884*	*14 / 0.355*	*33 / 31.619*	*99 / 57.191*
Subtotal: Procurement, All Modification Items	*- / 6.298*	*- / 0.300*	*- / 3.175*	*- / 3.915*	*- / -*	*- / 3.915*	*- / 3.591*	*- / 2.054*	*- / 5.884*	*- / 0.355*	*- / 31.619*	*- / 57.191*
Installation												
Modification Item 1 of 1: HB007 - SOPV REPLACEMENT	- / 8.326	- / 1.010	- / 3.988	- / 6.395	- / 0.000	- / 6.395	- / 7.679	- / 6.422	- / 5.958	- / 10.741	- / 40.774	- / 91.293
Subtotal: Installation	*- / 8.326*	*- / 1.010*	*- / 3.988*	*- / 6.395*	*- / -*	*- / 6.395*	*- / 7.679*	*- / 6.422*	*- / 5.958*	*- / 10.741*	*- / 40.774*	*- / 91.293*
Total												
Total Cost (Procurement + Support + Installation)	**14.624**	**1.310**	**7.163**	**10.310**	**0.000**	**10.310**	**11.270**	**8.476**	**11.842**	**11.096**	**72.393**	**148.484**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 2 / HB007 - SOPV REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: HB007 - SOPV REPLACEMENT

Manufacturer Information

Manufacturer Name: Marotta [8]	Manufacturer Location: Monteville NJ
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 6

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Feb 2022	Feb 2023	Feb 2024	Feb 2025	Feb 2026	Feb 2027	Feb 2028
Delivery Dates	Oct 2022	Oct 2023	Oct 2024	Oct 2025	Oct 2026	Oct 2027	Oct 2028

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: SHIPALT/DSA:: Installation Name: HB007 - SOPV REPLACEMENT HW

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	15 / 8.326	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 8.326
FY 2022	- / -	1 / 1.010	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.010
FY 2023	- / -	- / -	5 / 3.988	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 3.988
FY 2024	- / -	- / -	- / -	8 / 6.395	0 / 0.000	8 / 6.395	- / -	- / -	- / -	- / -	0 / 0.000	8 / 6.395
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	9 / 7.679	- / -	- / -	- / -	0 / 0.000	9 / 7.679
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 6.422	- / -	- / -	0 / 0.000	8 / 6.422
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 5.958	- / -	0 / 0.000	6 / 5.958
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 10.741	0 / 0.000	14 / 10.741
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 40.774	33 / 40.774
Total	15 / 8.326	1 / 1.010	5 / 3.988	8 / 6.395	0 / 0.000	8 / 6.395	9 / 7.679	8 / 6.422	6 / 5.958	14 / 10.741	33 / 40.774	99 / 91.293

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 2 / HB007 - SOPV REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: HB007 - SOPV REPLACEMENT

Installation Information

Method of Implementation: SHIPALT/DSA:: Installation Name: HB007 - SOPV REPLACEMENT HW

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	15	-	-	1	-	-	-	5	-	-	-	8	-	-	-	9	-	-	-	8	-	-	-	6	-	-	-	14	-	33	99
Out	12	3	-	-	1	-	-	-	3	2	-	-	3	3	2	-	3	3	3	-	3	3	2	-	3	3	-	-	3	44	99

Footnotes:

(7) Installation quantities reflect number of SHIPALTS to be performed during each FY. DSA quantities are not shown. FY2023 procurement/installation quantity decrease from 7 to five due to installation schedule variation; increased MOPV hardware costs and increased shipyard installation costs. FY2024 procurement funding request shows an increase of $0.740M due to increasing the number of procurements from 5 to 8. FY2024 installation funding request shows an increase of $2.407M due to increasing the number of installations from 5 to 8. FY2024 procurement funding request shows a procurement unit cost decrease from FY2023 to FY2024 due to variation in the ship class quantities required for installation.

(8) Same contract provides motor-operated pilot valve requirements under HB002.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 3 / HB008 - SCBA REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	73.738	6.014	0.000	0.000	0.000	0.000	0.000	4.949	0.000	0.000	0.000	84.701
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	73.738	6.014	0.000	0.000	0.000	0.000	0.000	4.949	0.000	0.000	0.000	84.701
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**73.738**	**6.014**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4.949**	**0.000**	**0.000**	**0.000**	**84.701**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Self-Contained Breathing Apparatus (SCBA) is a compressed air breathing device compatible with a firefighter's protective wear and helmet, and other damage control equipment. The SCBA are reaching the end of their service life of 15 years and are being replaced with 30 year cylinders. SCBA replacement is required to ensure that ships will deploy with operational safety equipment on-board to provide breathable air while fighting shipboard fires.

Quantities are number of ships.

Requirement: AFDL 0001, AFDM 0001, CG 0047, DDG 0051 (Flight I,II,IIA), LCC 0019, LCU, LHD 0001, LPD 0017, LSD 0041, LSD 0049, MCM 0001, and PC 0001 ship classes.

PROCUREMENT: Funding includes the breathing apparatus, 45-minute air cylinders, and 30-minute air cylinders, shipping, distribution to, and modifying stowage on ships. SCBA procurement costs can vary significantly based on ship class.

INSTALLATION: Funding includes all costs associated with the Fleet Modernization Program SCBA equipment installations onboard ships. SCBA installation costs can vary significantly based on ship class, ship port location and ship installation availability.

There are no installations scheduled in FY 2023 or FY 2024.

SCBA replacement fielding will be complete in FY 2026.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 3 / HB008 - SCBA REPLACEMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: N/A	**Modification Type:** SCBA REPLACEMENT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: HB008 - SCBA REPLACEMENT												
B Kits												
Recurring												
1.1.1) HB008 - SCBA REPLACEMENT HW - NonOrganic	164 / 61.146	7 / 4.646	- / -	- / -	- / -	- / -	- / -	3 / 4.027	- / -	- / -	- / -	174 / 69.819
Subtotal: Recurring	*- / 61.146*	*- / 4.646*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.027*	*- / -*	*- / -*	*- / 0.000*	*- / 69.819*
Subtotal: HB008 - SCBA REPLACEMENT	*164 / 61.146*	*7 / 4.646*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*3 / 4.027*	*- / -*	*- / -*	*- / -*	*174 / 69.819*
Subtotal: Procurement, All Modification Items	*- / 61.146*	*- / 4.646*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.027*	*- / -*	*- / -*	*- / 0.000*	*- / 69.819*
Installation												
Modification Item 1 of 1: HB008 - SCBA REPLACEMENT	- / 12.592	- / 1.368	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.922	- / 0.000	- / 0.000	- / 0.000	- / 14.882
Subtotal: Installation	*- / 12.592*	*- / 1.368*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.922*	*- / -*	*- / -*	*- / 0.000*	*- / 14.882*
Total												
Total Cost (Procurement + Support + Installation)	**73.738**	**6.014**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4.949**	**0.000**	**0.000**	**0.000**	**84.701**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0910 / Firefighting Equipment	**Modification Number / Title:** 3 / HB008 - SCBA REPLACEMENT

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: HB008 - SCBA REPLACEMENT

Manufacturer Information

Manufacturer Name: SCOTT HEALTH & SAFETY | Manufacturer Location: MONROE, NC

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 3

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jan 2022				Jan 2026		
Delivery Dates	Apr 2022				Apr 2026		

Installation Information

Method of Implementation: SHIPALT:: Installation Name: HB008 - SCBA REPLACEMENT HW

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	164 / 12.592	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	164 / 12.592
FY 2022	- / -	7 / 1.368	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 1.368
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.922	- / -	- / -	0 / 0.000	3 / 0.922
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	164 / 12.592	7 / 1.368	- / -	- / -	- / -	- / -	- / -	3 / 0.922	- / -	- / -	0 / 0.000	174 / 14.882

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	164	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	174
Out	152	5	5	2	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	174

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0925 / Command and Control Switchboard

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	80.668	2.194	2.406	2.458	0.000	2.458	2.407	2.455	2.506	2.564	-	97.658
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	80.668	2.194	2.406	2.458	0.000	2.458	2.407	2.455	2.506	2.564	-	97.658
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**80.668**	**2.194**	**2.406**	**2.458**	**0.000**	**2.458**	**2.407**	**2.455**	**2.506**	**2.564**	**-**	**97.658**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The switchboard program provides mission critical switching capability required to link shipboard combat equipment including weapons, launchers, sensors, computers and navigation equipment. In essence, switchboards serve as
the central connection point for most elements of combat and weapon systems, interior communications, data transfer, and command and control systems. They are designed to accommodate either analog, digital interfaces, or a
combination of both. In total, this budget item supports approximately 200 ships and 1,000 pieces of equipment throughout the acquisition life cycle.

Functions include: data routing, action cutout, test and operating mode selection (including casualty back-up modes), power monitoring and control, circuit protection, peripheral equipment isolation, signal processing, and frequency conversion amplification and switching. In summary, the primary purpose is to provide systems intra and interface compatibility.

Changes in other elements of the combat and Interior Communication (IC) systems will frequently mandate either conjunctive modification to switchboards via ship change documents (SCDs), ordnance alteration (ORDALT)/
field changes (FCs) or partial or complete replacement of existing switchboards. Typical switchboard mods include hardware/field change kits, ORDALT/SCD/FC instructions, technical manual updates and revisions to other
supporting documentation. Hull unique switchboard configurations require hull unique documentation. Subsequent alterations to these switchboards require hull unique design, hardware, installation, and checkout procedures.
New Switchboards are normally installed during a regular overhaul by a shipyard.

Command and control switchboards are currently installed on and are required for almost all surface combatants and amphibious warfare ships. Individual switchboard unit cost varies from ship to ship, depending upon size,
complexity, and whether analog or digital interfaces or some combination thereof are utilized. Modifications to existing switchboards via Ship Alterations (SHIPALTs), SCDs, ORDALTs or FCs are quantified by kits or change
packages rather than individual units. The number of kits required for different classes of ships are as follows: DDGs/CGs require three to four (3 - 4) per ship, LSDs require two (2) per ship, LPDs require one (1) per ship, MCMs

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0925 / Command and Control Switchboard	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

require (3) per ship and LHDs require two (2) per ship. The magnitude of modifications also varies, as Cruiser Modernization is considerably more complex than the Amphibious Class hulls. Switchboard hardware is normally
procured by the Invitation For Bids (IFB) process, from manufacturers on Qualified Products List (QPL)-17000. There are currently six companies listed on QPL-17000. All contracts awarded are competitive, fixed price.

[P40A / ENG UPGRADES/MODS TO EQUIPMENT & TECH DOCUMENTATION]: Combat Systems & Interior Communication Switchboard Engineering and Modifications Upgrades to Equipment, Drawings, Technical Manuals (TMs) Allowance Parts Lists (APLs) and Allowance Equipage Lists (AELs). This line covers the costs to upgrade/modify existing equipment and associated technical documentation to implement and validate upgraded switching configurations essential for the ships' switchboards to properly integrate all elements of the Combat System and Interior Communication interfaces. The upgraded engineering modification drives the procurement of hardware modification kits (i.e., ORDALTs & Field Changes). These engineering modifications are essential to the functional deployment of Battle Force Interoperability.

[P40A / ORDALT/FIELD CHANGE KITS]: Combat Systems & Interior Communication Switchboard Engineering and Modification Upgrade Procurements. This line covers the costs to implement and validate upgraded Procurement of ORDALT/Field Changes kits driven by upgraded engineering modification. These engineering modifications are essential to the functional deployment of Battle Force Interoperability.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0925 / Command and Control Switchboard

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	COMMAND AND CONTROL SWITCHBOARD	P-5a			- / 80.668	- / 2.194	- / 2.406	- / 2.458	- / -	- / 2.458
P-40	**Total Gross/Weapon System Cost**				**- / 80.668**	**- / 2.194**	**- / 2.406**	**- / 2.458**	**- / 0.000**	**- / 2.458**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0925 / Command and Control Switchboard	**Aggregated Items Title:** COMMAND AND CONTROL SWITCHBOARD

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) ENG UPGRADES/MODS TO EQUIPMENT & TECH DOCUMENTATION																				
1.1) ENGINEERING UPGRADES/MODS TO EQUIPMENT & TECHNICAL DOCUMENTATION	A		-	-	28.237	-	-	1.548	-	-	1.745	-	-	1.781	-	-	-	-	-	1.781
Subtotal: 1) ENG UPGRADES/ MODS TO EQUIPMENT & TECH DOCUMENTATION			**-**	**-**	***28.237***	**-**	**-**	***1.548***	**-**	**-**	***1.745***	**-**	**-**	***1.781***	**-**	**-**	**-**	**-**	**-**	***1.781***
2) ORDALT/FIELD CHANGE KITS																				
2.1) ORDALT/FIELD CHANGE KITS(†)	A		222,165.25	236	52.431	46,142.86	14	0.646	47,214.29	14	0.661	48,357.14	14	0.677	-	-	-	48,357.14	14	0.677
Subtotal: 2) ORDALT/FIELD CHANGE KITS			**-**	**-**	***52.431***	**-**	**-**	***0.646***	**-**	**-**	***0.661***	**-**	**-**	***0.677***	**-**	**-**	**-**	**-**	**-**	***0.677***
Total			**-**	**-**	**80.668**	**-**	**-**	**2.194**	**-**	**-**	**2.406**	**-**	**-**	**2.458**	**-**	**-**	**-**	**-**	**-**	**2.458**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0925 / Command and Control Switchboard	Aggregated Items: COMMAND AND CONTROL SWITCHBOARD

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2) ORDALT/FIELD CHANGE KITS												
2.1) ORDALT/FIELD CHANGE KITS		2022	Valkyrie / Oxnard, CA	C / CPFF	Port Hueneme, CA	Nov 2021	Jan 2022	14	46,142.86	Y		
2.1) ORDALT/FIELD CHANGE KITS		2023	Valkyrie / Oxnard, CA	C / CPFF	Port Hueneme, CA	Nov 2022	Jan 2023	14	47,214.29	Y		
2.1) ORDALT/FIELD CHANGE KITS		2024	Valkyrie / Oxnard, CA	C / CPFF	Port Hueneme, CA	Nov 2023	Jan 2024	14	48,357.14	Y		

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	221.658	119.428	38.200	104.369	0.000	104.369	94.405	103.921	124.047	119.758	241.107	1,166.893
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	221.658	119.428	38.200	104.369	0.000	104.369	94.405	103.921	124.047	119.758	241.107	1,166.893
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**221.658**	**119.428**	**38.200**	**104.369**	**0.000**	**104.369**	**94.405**	**103.921**	**124.047**	**119.758**	**241.107**	**1,166.893**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	0.089	-	-	-	-	0.089
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funds provided for the modernization of Amphibious Assault Ships. Increase from FY23 to FY24 is substantiated by an increase in the following efforts: a Power Management Platform installation, a Brushless Generator installation, HYDRA, and Amplified Announcing system procurements in FY24. Prior year Total Obligational Authority reflects a delta of 18.207 for SATCC and NAVCRIT due to no FY22 and out requirements.

This budget provides funding for targeted modernization of various HM&E systems on board the LHD and LHA class Amphibious Assault Ships. Some major modernization efforts include the procurement and installation of Brushless Generators, Electric Plant and Power Management Platform (PMP), Main Feed Pump replacement, and Propulsion and Auxiliary Control System (PACS), Ballast and DC Console, and Modular Refrigeration System.

Brushless Generator replacement will reduce down time, total ownership costs, and maintenance costs associated with antiquated brush type generators. Main feed pump procurement and install replaces obsolete main feed pumps for the main propulsion boiler. Propulsion and Auxiliary Control System (PACS) provides a network infrastructure for HM&E systems.

[P40A / JSF ALIS]: Joint Strike Fighter Autonomic Logistics Information System (JSF ALIS) is the tactical aircraft logistics system focused on sustainment, together with economies of scale supporting a global supply chain system for aircraft. JSF ALIS is deploying with an Operational Data Integrated Network (ODIN) via On-Board Kit (OBK) rollout.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0933 / LHA/LHD Midlife

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	LHA/LHD Midlife				- / 37.644	- / 12.300	- / 9.311	- / 4.178	- / -	- / 4.178
P-3a	1 / Machinery Control System (MCS) (TBD)				- / 3.388	- / 7.175	- / 14.952	- / 13.358	- / 0.000	- / 13.358
P-3a	2 / Power Management Platform (Electric Plant Control) (TBD)				- / 12.325	- / 18.208	- / 2.540	- / 24.507	- / 0.000	- / 24.507
P-3a	3 / Brushless Generator (TBD)				- / 48.556	- / 15.228	- / 0.000	- / 8.822	- / 0.000	- / 8.822
P-3a	4 / Main Feed Pump (TBD)				- / 5.350	- / 9.244	- / 1.103	- / 5.737	- / 0.000	- / 5.737
P-3a	6 / Ballast and DC Console (TBD)				- / 13.056	- / 1.765	- / 0.576	- / 2.690	- / 0.000	- / 2.690
P-3a	7 / Ship Control System (TBD)				- / 14.211	- / 11.157	- / 5.740	- / 7.156	- / 0.000	- / 7.156
P-3a	8 / High Efficiency Super Capacity (HES-C) Chiller (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / Propulsion and Auxiliary Control System (PACS) (TBD)				- / 29.324	- / 36.975	- / 3.804	- / 24.966	- / 0.000	- / 24.966
P-3a	9 / Modular Refrigeration System (MRS) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	10 / HYDRA (TBD)				- / 22.328	- / 5.229	- / 0.000	- / 8.364	- / 0.000	- / 8.364
P-3a	11 / Amplified Announcing System (TBD)				- / 13.823	- / 2.147	- / 0.036	- / 4.086	- / 0.000	- / 4.086
P-3a	12 / DCSS (TBD)				- / 2.425	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	13 / ICT (TBD)				- / 7.412	- / 0.000	- / 0.036	- / 0.132	- / 0.000	- / 0.132
P-3a	14 / IVN (TBD)				- / 4.487	- / 0.000	- / 0.102	- / 0.373	- / 0.000	- / 0.373
P-3a	15 / IVCN (TBD)				- / 7.329	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 221.658**	**- / 119.428**	**- / 38.200**	**- / 104.369**	**- / 0.000**	**- / 104.369**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	LHA/LHD Midlife				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Machinery Control System (MCS) (TBD)				- / 5.024	- / 2.917	- / 16.369	- / 3.162	- / 7.882	- / 74.227
P-3a	2 / Power Management Platform (Electric Plant Control) (TBD)				- / 1.941	- / 12.061	- / 14.362	- / 13.837	- / 12.321	- / 112.102
P-3a	3 / Brushless Generator (TBD)				- / 14.252	- / 2.532	- / 6.727	- / 0.000	- / 0.000	- / 96.117
P-3a	4 / Main Feed Pump (TBD)				- / 2.896	- / 4.115	- / 10.225	- / 7.348	- / 9.559	- / 55.577
P-3a	6 / Ballast and DC Console (TBD)				- / 1.601	- / 2.391	- / 0.000	- / 0.000	- / 0.000	- / 22.079
P-3a	7 / Ship Control System (TBD)				- / 3.468	- / 0.000	- / 0.000	- / 0.000	- / 5.967	- / 47.699
P-3a	8 / High Efficiency Super Capacity (HES-C) Chiller (TBD)				- / 0.000	- / 23.816	- / 24.766	- / 22.670	- / 133.302	- / 204.554
P-3a	5 / Propulsion and Auxiliary Control System (PACS) (TBD)				- / 24.458	- / 2.955	- / 22.221	- / 0.000	- / 0.000	- / 144.703
P-3a	9 / Modular Refrigeration System (MRS) (TBD)				- / 0.000	- / 2.350	- / 0.491	- / 7.348	- / 48.018	- / 58.207
P-3a	10 / HYDRA (TBD)				- / 7.836	- / 9.328	- / 8.133	- / 7.973	- / 4.648	- / 73.839
P-3a	11 / Amplified Announcing System (TBD)				- / 4.223	- / 4.232	- / 4.323	- / 2.108	- / 2.000	- / 36.978
P-3a	12 / DCSS (TBD)				- / 0.000	- / 1.355	- / 1.638	- / 0.606	- / 3.341	- / 9.365

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	13 / ICT (TBD)				- / 1.643	- / 1.157	- / 0.815	- / 0.687	- / 2.164	- / 14.046
P-3a	14 / IVN (TBD)				- / 8.346	- / 0.386	- / 1.795	- / 0.000	- / 10.100	- / 25.589
P-3a	15 / IVCN (TBD)				- / 0.000	- / 6.054	- / 6.441	- / 2.008	- / 1.755	- / 23.587
P-40	**Total Gross/Weapon System Cost**				**- / 94.405**	**- / 103.921**	**- / 124.047**	**- / 119.758**	**- / 241.107**	**- / 1,166.893**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Funds provided for the modernization of Amphibious Assault Ships. Increase from FY23 to FY24 is substantiated by an increase in the following efforts: a Power Management Platform installation, a Brushless Generator installation, HYDRA, and Amplified Announcing system procurements in FY24.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Aggregated Items Title:** LHA/LHD Midlife

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) LH002 Conjunctive Alterations																				
1.1) Conjunctive Alterations (1)	A		-	-	36.362	-	-	11.100	-	-	5.399	-	-	2.028	-	-	-	-	-	2.028
1.2) HM&E CONDITION SYSTEM (2)	A		-	-	1.282	-	-	1.200	-	-	0.712	-	-	2.150	-	-	-	-	-	2.150
Subtotal: 1) LH002 Conjunctive Alterations			**-**	**-**	***37.644***	**-**	**-**	***12.300***	**-**	**-**	***6.111***	**-**	**-**	***4.178***	**-**	**-**	**-**	**-**	**-**	***4.178***
2) JSF ALIS																				
2.1) JSF ALIS (3)	A		-	-	-	-	-	-	-	-	3.200	-	-	-	-	-	-	-	-	-
Subtotal: 2) JSF ALIS			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***3.200***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**37.644**	**-**	**-**	**12.300**	**-**	**-**	**9.311**	**-**	**-**	**4.178**	**-**	**-**	**-**	**-**	**-**	**4.178**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) Conjunctive Alterations includes Growth Work during installations of LHA/LHD Midlife items during Shipyard Availabilities, as well as HM&E modifications to accommodate IWS, NAVWAR, NAVAIR and other Program's Modernization. This funding was reduced in FY22 in support of Machinery Control System, Power Management Platform (Electric Plant). During FY23 funding was realigned from conjunctive alterations in support of Joint Strike Fight (JSF) Autonomic Logistics Information System (ALIS). Funding was reduced from FY23 to FY24 due to reprogramming of efforts as well as cost updates across all efforts, the conjunctive line was updated to balance against control.

(2) The solution proposed implements HM&E principles, it will implement a Defense-in-Depth Functional Implementation Architecture (DFIA) and meet the requirements of the standards released by the Information Assurance Technical Authority Board (IA TAB) across all the HM&E systems deploying the ability to protect, detect, react, and restore in a contested environment. The HM&E Condition System will monitor the signals on the HM&E network, both between HM&E systems and also those coming from other functional domains. FY24 HM&E Condition System increased from FY23 to FY24 due to increased level of effort in preparation for cyber hardening implementation on LHD 2 in FY25.

(3) FY23 funding ($3.200M) for JSF ALIS supports the procurement and installation of (3) JSF ALIS units for USS BOUGAINVILLE, USS BATAAN and USS KEARSARGE. JSF ALIS is deploying with an Operational Data Integrated Network (ODIN) via On-Board Kit (OBK) rollout. The JSF ALIS ODIN is a form/fit/function install. Installs are to be performed by the In-Service Engineering Agent (ISEA). Installs are not limited to CNO availability schedules and may be performed within windows of opportunity (WOO).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 1 / Machinery Control System (MCS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3.388	7.175	14.952	13.358	0.000	13.358	5.024	2.917	16.369	3.162	7.882	74.227
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3.388	7.175	14.952	13.358	0.000	13.358	5.024	2.917	16.369	3.162	7.882	74.227
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3.388**	**7.175**	**14.952**	**13.358**	**0.000**	**13.358**	**5.024**	**2.917**	**16.369**	**3.162**	**7.882**	**74.227**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Machinery Control System (MCS) will replace the existing obsolete Versa Module Europa (VME) server with Windows XP operating system (O/S) that was purchased in the mid-2000s as part of the ship construction award for LHD8 and LHA6. Both the hardware and software are no longer supported by industry and require a complete replacement. MCS will leverage existing infrastructure replacing internal hardware to the existing system's servers. LHD8, LHA 6-7 will receive a Versatile Performance Switching (VPX) server with Windows 10, or future O/S that provides improved bandwidth for control of the ship's 37 vital engineering systems, while maintain margin for new capabilities to be introduced. The new system provides room for growth and flexibility to easily incorporate emerging cyber security requirements that will help prevent adversarial threats.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 1 / Machinery Control System (MCS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Machinery Control System (MCS)												
B Kits												
Non-Recurring												
2.2.1) MCS PROCUREMENT - NonOrganic [4]	- / -	- / -	1 / 9.662	1 / 9.662	- / -	1 / 9.662	- / -	- / -	1 / 10.193	- / -	- / -	3 / 29.517
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / 9.662*	*- / 9.662*	*- / -*	*- / 9.662*	*- / -*	*- / -*	*- / 10.193*	*- / -*	*- / 0.000*	*- / 29.517*
Subtotal: Machinery Control System (MCS)	*- / -*	*- / -*	*1 / 9.662*	*1 / 9.662*	*- / -*	*1 / 9.662*	*- / -*	*- / -*	*1 / 10.193*	*- / -*	*- / -*	*3 / 29.517*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / 9.662*	*- / 9.662*	*- / -*	*- / 9.662*	*- / -*	*- / -*	*- / 10.193*	*- / -*	*- / 0.000*	*- / 29.517*
Support *(All Modification Items)*												
3.1) ENGINEERING SERVICES [5]	- / -	- / -	- / 2.016	- / 0.353	- / -	- / 0.353	- / -	- / -	- / 0.372	- / -	- / 0.400	- / 3.141
3.2) Alteration NRE [6]	- / 3.388	- / 7.175	- / 3.274	- / 3.343	- / -	- / 3.343	- / 5.024	- / 0.488	- / 5.804	- / 0.636	- / 4.809	- / 33.941
Subtotal: Support	*- / 3.388*	*- / 7.175*	*- / 5.290*	*- / 3.696*	*- / -*	*- / 3.696*	*- / 5.024*	*- / 0.488*	*- / 6.176*	*- / 0.636*	*- / 5.209*	*- / 37.082*
Installation												
Modification Item 1 of 1: Machinery Control System (MCS)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.429	- / 0.000	- / 2.526	- / 2.673	- / 7.628
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.429*	*- / -*	*- / 2.526*	*- / 2.673*	*- / 7.628*
Total												
Total Cost (Procurement + Support + Installation)	**3.388**	**7.175**	**14.952**	**13.358**	**0.000**	**13.358**	**5.024**	**2.917**	**16.369**	**3.162**	**7.882**	**74.227**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 1 / Machinery Control System (MCS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Machinery Control System (MCS)

Manufacturer Information

Manufacturer Name: Multiple	Manufacturer Location: TBDMulti
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 48

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Oct 2022	Jun 2024			Apr 2027	
Delivery Dates		Oct 2026	Jun 2028			Apr 2031	

Installation Information

Method of Implementation: [none specified]:: Installation Name: MCS PROCUREMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.429	- / -	- / -	0 / 0.000	1 / 2.429
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.526	0 / 0.000	1 / 2.526
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.673	1 / 2.673
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.429	- / -	1 / 2.526	1 / 2.673	3 / 7.628

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	3
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	3

Footnotes:

(4) MCS requires sufficient upfront cost for non-reoccurring engineering services because of the significant amount of control the system provides to 37-subsystems throughout the ship via 10,000 different signals. The NRE will be utilized for first article environmental quality testing of 12 different components and establishment of an MCS Land Based Test Facility that will be required for software development for future availabilities and be leveraged for system engineering for milestone review and Cyber Security hardening under the Risk Management Framework. Installation funding for a ship was previously divided over a three-year period. Installation execution funding in the year of availability has remained constant, however with Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 1 / Machinery Control System (MCS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

the availability being hull specific, this funding has been shifted into the Engineering NRE line. These efforts include ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. $0.512M previously budgeted in FY23 was realigned and the requirement shifted to FY24 as the associated installation shifted from FY25 to FY26. This funding was identified for pre-installation ship checks at the standard two-years prior to installation.

(5) First in class procurement in FY23 supports FY26 LHA-6 install, which required an additional three (3) month lead time in receipt of material for NRE services and system assembly. System component procurements are made from multiple vendors. All assembly and testing is conducted at NSWC Philadelphia. FY24 engineering services required have decreased since FY23, necessitating a decrease in the requirement.

(6) Additional NRE funding required as it includes A-1 costs for FY23 installation as well as A-2 costs for the FY24 installation.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 2 / Power Management Platform (Electric Plant Control)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	12.325	18.208	2.540	24.507	0.000	24.507	1.941	12.061	14.362	13.837	12.321	112.102
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	12.325	18.208	2.540	24.507	0.000	24.507	1.941	12.061	14.362	13.837	12.321	112.102
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**12.325**	**18.208**	**2.540**	**24.507**	**0.000**	**24.507**	**1.941**	**12.061**	**14.362**	**13.837**	**12.321**	**112.102**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Description: Power Management Platform (PMP) modernization converts legacy analog controls to a digital automated control system. This system gathers and combines all Electric plant data that can be monitored at different control stations throughout the engineering plant ensuring redundancy of the system. PMP simplifies multiple control sequences into single step operations, making possible new control capabilities that were too cumbersome for operators to perform. PMP implements a gradual Ship Service Turbine Generator (SSTG) turbine startup/shutdown sequence which allows the turbine to achieve stabilized temperatures more consistently, reducing operational stress on components and improves reliability and operational availability of the system. PMP automation will reduce electrical system transients and stress on breaker components by employing a Zero Power Transfer (ZPT) strategy, which limits the current flow through an individual breaker to zero during open/close evolutions. During PMP installation obsolete switchboard breakers will be replaced with Commercial Off-the-Shelf (COTS) Whipp and Bourne circuit breakers that will improve navy total ownership by increasing commonality across the fleet and reducing preventative and corrective maintenance.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 2 / Power Management Platform (Electric Plant Control)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Power Management Platform (Electric Plant Control)												
B Kits												
Recurring												
1.1.1) Power Management Platform (Electric Plant Control) - NonOrganic (7)	1 / 9.994	1 / 16.062	- / -	- / -	- / -	- / -	- / -	1 / 11.255	1 / 11.458	- / -	- / -	4 / 48.769
Subtotal: Recurring	*- / 9.994*	*- / 16.062*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 11.255*	*- / 11.458*	*- / -*	*- / 0.000*	*- / 48.769*
Subtotal: Power Management Platform (Electric Plant Control)	*1 / 9.994*	*1 / 16.062*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 11.255*	*1 / 11.458*	*- / -*	*- / -*	*4 / 48.769*
Subtotal: Procurement, All Modification Items	*- / 9.994*	*- / 16.062*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 11.255*	*- / 11.458*	*- / -*	*- / 0.000*	*- / 48.769*
Support *(All Modification Items)*												
2.1) PMP Eng Services (8)	- / 0.296	- / 1.708	- / 0.315	- / 1.797	- / -	- / 1.797	- / 1.941	- / 0.333	- / 0.339	- / -	1 / 0.398	1 / 7.127
Subtotal: Support	*- / 0.296*	*- / 1.708*	*- / 0.315*	*- / 1.797*	*- / -*	*- / 1.797*	*- / 1.941*	*- / 0.333*	*- / 0.339*	*- / -*	*- / 0.398*	*- / 7.127*
Installation												
Modification Item 1 of 1: Power Management Platform (Electric Plant Control)	- / 2.035	- / 0.438	- / 2.225	- / 22.710	- / 0.000	- / 22.710	- / 0.000	- / 0.473	- / 2.565	- / 13.837	- / 11.923	- / 56.206
Subtotal: Installation	*- / 2.035*	*- / 0.438*	*- / 2.225*	*- / 22.710*	*- / -*	*- / 22.710*	*- / -*	*- / 0.473*	*- / 2.565*	*- / 13.837*	*- / 11.923*	*- / 56.206*
Total												
Total Cost (Procurement + Support + Installation)	**12.325**	**18.208**	**2.540**	**24.507**	**0.000**	**24.507**	**1.941**	**12.061**	**14.362**	**13.837**	**12.321**	**112.102**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 2 / Power Management Platform (Electric Plant Control)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: Power Management Platform (Electric Plant Control)

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 22

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2023				Feb 2026	Jun 2027	
Delivery Dates	Jan 2025				Dec 2027	Apr 2029	

Installation Information

Method of Implementation: [none specified]:: Installation Name: Power Management Platform (Electric Plant Control)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 2.035	- / -	0 / 0.447	1 / 12.285	0 / 0.000	1 / 12.285	- / -	- / -	- / -	- / -	0 / 0.000	1 / 14.767
FY 2022	- / -	0 / 0.438	0 / 1.778	1 / 10.425	0 / 0.000	1 / 10.425	- / -	- / -	- / -	- / -	0 / 0.000	1 / 12.641
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.473	0 / 2.083	1 / 11.714	0 / 0.000	1 / 14.270
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.482	0 / 2.123	1 / 11.923	1 / 14.528
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 2.035	0 / 0.438	0 / 2.225	2 / 22.710	0 / 0.000	2 / 22.710	- / -	0 / 0.473	0 / 2.565	1 / 13.837	1 / 11.923	4 / 56.206

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	4
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	2	4

Footnotes:

(7) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 2 / Power Management Platform (Electric Plant Control)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

(8) Engineering Services increase from FY23 to FY24 as the In-Service Engineering Agents (ISEAs) are preparing the system through validation and verification pre-installation checks in preparation for installation in late FY24. Additionally, program received updated actual costs from the ISEAs which necessitated an increase in allocated funding due to level of effort.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 3 / Brushless Generator
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	48.556	15.228	0.000	8.822	0.000	8.822	14.252	2.532	6.727	0.000	0.000	96.117
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	48.556	15.228	0.000	8.822	0.000	8.822	14.252	2.532	6.727	0.000	0.000	96.117
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**48.556**	**15.228**	**0.000**	**8.822**	**0.000**	**8.822**	**14.252**	**2.532**	**6.727**	**0.000**	**0.000**	**96.117**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Brushless Generator replacement will reduce down time, total ownership costs, and maintenance costs associated with antiquated brush type generators.

Brushless Generator Upgrade replaces a LHD's (5) brush-type Ship's Service Turbine Generators that are plagued by severe reliability, maintenance and obsolescence problems. Brushless Generator Upgrade will reduce both S/F and depot level maintenance requirements, and increase a LHD's electric plant Operational Availability (Ao).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 3 / Brushless Generator
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: LHD Midlife PMP	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Brushless Generator												
B Kits												
Recurring												
1.1.1) Brushless Generator for PMP - NonOrganic (9)	3 / 19.521	1 / 6.454	- / -	- / -	- / -	- / -	1 / 6.849	- / -	- / -	- / -	- / -	5 / 32.824
Subtotal: Recurring	*- / 19.521*	*- / 6.454*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.849*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 32.824*
Subtotal: Brushless Generator	*3 / 19.521*	*1 / 6.454*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 6.849*	*- / -*	*- / -*	*- / -*	*- / -*	*5 / 32.824*
Subtotal: Procurement, All Modification Items	*- / 19.521*	*- / 6.454*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.849*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 32.824*
Support *(All Modification Items)*												
2.1) Non-Recurring Engineering	- / 10.197	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.197
2.2) Engineering Services	- / 0.724	- / 0.677	- / -	- / 0.423	- / -	- / 0.423	- / 0.503	- / 0.219	- / 0.223	- / -	- / -	- / 2.769
Subtotal: Support	*- / 10.921*	*- / 0.677*	*- / -*	*- / 0.423*	*- / -*	*- / 0.423*	*- / 0.503*	*- / 0.219*	*- / 0.223*	*- / -*	*- / 0.000*	*- / 12.966*
Installation												
Modification Item 1 of 1: Brushless Generator	- / 18.114	- / 8.097	- / 0.000	- / 8.399	- / 0.000	- / 8.399	- / 6.900	- / 2.313	- / 6.504	- / 0.000	- / 0.000	- / 50.327
Subtotal: Installation	*- / 18.114*	*- / 8.097*	*- / -*	*- / 8.399*	*- / -*	*- / 8.399*	*- / 6.900*	*- / 2.313*	*- / 6.504*	*- / -*	*- / 0.000*	*- / 50.327*
Total												
Total Cost (Procurement + Support + Installation)	**48.556**	**15.228**	**0.000**	**8.822**	**0.000**	**8.822**	**14.252**	**2.532**	**6.727**	**0.000**	**0.000**	**96.117**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 3 / Brushless Generator
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Brushless Generator

Manufacturer Information

Manufacturer Name: KATO ENGINEERING	Manufacturer Location: MN
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022			Feb 2025			
Delivery Dates	Mar 2024			Feb 2027			

Installation Information

Method of Implementation: AIT/Industrial:: Installation Name: Brushless Generator for PMP

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 18.114	1 / 7.513	- / -	1 / 6.170	0 / 0.000	1 / 6.170	- / -	- / -	- / -	- / -	0 / 0.000	3 / 31.797
FY 2022	- / -	0 / 0.584	- / -	0 / 2.229	0 / 0.000	0 / 2.229	1 / 6.280	- / -	- / -	- / -	0 / 0.000	1 / 9.093
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.620	0 / 2.313	1 / 6.504	- / -	0 / 0.000	1 / 9.437
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 18.114	1 / 8.097	- / -	1 / 8.399	0 / 0.000	1 / 8.399	1 / 6.900	0 / 2.313	1 / 6.504	- / -	0 / 0.000	5 / 50.327

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	5
Out	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	5

Footnotes:

(9) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 3 / Brushless Generator
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. The FY24 procurement was canceled due to availability shifts.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 4 / Main Feed Pump
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	5.350	9.244	1.103	5.737	0.000	5.737	2.896	4.115	10.225	7.348	9.559	55.577
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	5.350	9.244	1.103	5.737	0.000	5.737	2.896	4.115	10.225	7.348	9.559	55.577
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**5.350**	**9.244**	**1.103**	**5.737**	**0.000**	**5.737**	**2.896**	**4.115**	**10.225**	**7.348**	**9.559**	**55.577**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Main Feed Pump (MFP) replacement addresses system obsolescence by installing an industry supported, steam driven pump with a new electronic automatic boiler control that will prevent over-speed conditions, which is a major cause of MFP failures. The new pump will improve reliability, operational availability and bring commonality with other ship classes.
Engineering Services required in year prior to install.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 4 / Main Feed Pump
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Main Feed Pump												
B Kits												
Recurring												
1.1.1) Main Feed Pump - NonOrganic (10)	1 / 2.300	1 / 2.398	- / -	- / -	- / -	- / -	1 / 2.545	1 / 2.590	1 / 2.637	- / -	- / 3.096	5 / 15.566
Subtotal: Recurring	*- / 2.300*	*- / 2.398*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.545*	*- / 2.590*	*- / 2.637*	*- / -*	*- / 3.096*	*- / 15.566*
Subtotal: Main Feed Pump	*1 / 2.300*	*1 / 2.398*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 2.545*	*1 / 2.590*	*1 / 2.637*	*- / -*	*- / 3.096*	*5 / 15.566*
Subtotal: Procurement, All Modification Items	*- / 2.300*	*- / 2.398*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.545*	*- / 2.590*	*- / 2.637*	*- / -*	*- / 3.096*	*- / 15.566*
Support *(All Modification Items)*												
2.1) Non-Recurring Engineering	- / 1.809	- / -	- / 0.173	- / -	- / -	- / -	- / -	- / 0.183	- / 0.186	- / 0.189	1 / 0.219	1 / 2.759
Subtotal: Support	*- / 1.809*	*- / -*	*- / 0.173*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.183*	*- / 0.186*	*- / 0.189*	*- / 0.219*	*- / 2.759*
Installation												
Modification Item 1 of 1: Main Feed Pump	- / 1.241	- / 6.846	- / 0.930	- / 5.737	- / 0.000	- / 5.737	- / 0.351	- / 1.342	- / 7.402	- / 7.159	- / 6.244	- / 37.252
Subtotal: Installation	*- / 1.241*	*- / 6.846*	*- / 0.930*	*- / 5.737*	*- / -*	*- / 5.737*	*- / 0.351*	*- / 1.342*	*- / 7.402*	*- / 7.159*	*- / 6.244*	*- / 37.252*
Total												
Total Cost (Procurement + Support + Installation)	**5.350**	**9.244**	**1.103**	**5.737**	**0.000**	**5.737**	**2.896**	**4.115**	**10.225**	**7.348**	**9.559**	**55.577**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 4 / Main Feed Pump
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Main Feed Pump

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022			Feb 2025	Dec 2025	May 2027	
Delivery Dates	Jun 2024			Feb 2027	Dec 2027	May 2029	

Installation Information

Method of Implementation: Industrial:: Installation Name: Main Feed Pump

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 1.241	1 / 6.515	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 7.756
FY 2022	- / -	0 / 0.331	0 / 0.930	1 / 5.737	0 / 0.000	1 / 5.737	- / -	- / -	- / -	- / -	0 / 0.000	1 / 6.998
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.351	0 / 0.984	1 / 6.036	- / -	0 / 0.000	1 / 7.371
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.358	0 / 1.002	1 / 6.139	0 / 0.000	1 / 7.499
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.364	0 / 1.020	1 / 6.244	1 / 7.628
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 1.241	1 / 6.846	0 / 0.930	1 / 5.737	0 / 0.000	1 / 5.737	0 / 0.351	0 / 1.342	1 / 7.402	1 / 7.159	1 / 6.244	5 / 37.252

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	5
Out	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	2	5

Footnotes:

(10) Funding is for procurement and installation of MFP equipment to address system obsolescence by installing an industry supported, steam driven pump with a new electronic automatic boiler control that will prevent over-speed conditions, which is a major cause of MFP failures. The new pump will improve reliability, operational availability and bring commonality with other ship classes. Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 4 / Main Feed Pump
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 6 / Ballast and DC Console
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	13.056	1.765	0.576	2.690	0.000	2.690	1.601	2.391	0.000	0.000	0.000	22.079
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	13.056	1.765	0.576	2.690	0.000	2.690	1.601	2.391	0.000	0.000	0.000	22.079
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**13.056**	**1.765**	**0.576**	**2.690**	**0.000**	**2.690**	**1.601**	**2.391**	**0.000**	**0.000**	**0.000**	**22.079**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[BALLAST AND DC CONSOLE PROCUREMENT] Description: Ballast and Damage Control Console install will replace the existing operator consoles for Ballasting, Firemain, Firefighting, and AFFF Systems with Commercial off-the-Shelf, dual screen consoles and Operator Interface Panels. These consoles have been plagued by power supply assemblies and circuit card obsolescence, which has made these system degraded from their normal capability reducing watch stander situational awareness. This install is a Class safety alt to prevent casualties such as Ballast tank over pressurization and flooding as seen on LHD 1 in FY15.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 6 / Ballast and DC Console
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Ballast and DC Console												
B Kits												
Recurring												
2.1.1) BALLAST AND DC CONSOLE PROCUREMENT - NonOrganic (11)	- / 13.056	- / -	- / -	1 / 1.583	- / -	1 / 1.583	- / -	- / -	- / -	- / -	- / -	1 / 14.639
Subtotal: Recurring	*- / 13.056*	*- / -*	*- / -*	*- / 1.583*	*- / -*	*- / 1.583*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 14.639*
Subtotal: Ballast and DC Console	*- / 13.056*	*- / -*	*- / -*	*1 / 1.583*	*- / -*	*1 / 1.583*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 14.639*
Subtotal: Procurement, All Modification Items	*- / 13.056*	*- / -*	*- / -*	*- / 1.583*	*- / -*	*- / 1.583*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 14.639*
Support *(All Modification Items)*												
3.1) ENGINEERING SUPPORT (12)	- / -	- / 1.765	- / 0.576	- / 0.882	- / -	- / 0.882	- / 0.599	- / -	- / -	- / -	- / -	- / 3.822
Subtotal: Support	*- / 0.000*	*- / 1.765*	*- / 0.576*	*- / 0.882*	*- / -*	*- / 0.882*	*- / 0.599*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.822*
Installation												
Modification Item 1 of 1: Ballast and DC Console	- / 0.000	- / 0.000	- / 0.000	- / 0.225	- / 0.000	- / 0.225	- / 1.002	- / 2.391	- / 0.000	- / 0.000	- / 0.000	- / 3.618
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.225*	*- / -*	*- / 0.225*	*- / 1.002*	*- / 2.391*	*- / -*	*- / -*	*- / 0.000*	*- / 3.618*
Total												
Total Cost (Procurement + Support + Installation)	**13.056**	**1.765**	**0.576**	**2.690**	**0.000**	**2.690**	**1.601**	**2.391**	**0.000**	**0.000**	**0.000**	**22.079**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 6 / Ballast and DC Console
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Ballast and DC Console

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates			Jun 2024				
Delivery Dates			Jun 2026				

Installation Information

Method of Implementation: [none specified]:: Installation Name: BALLAST AND DC CONSOLE PROCUREMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	0 / 0.225	0 / 0.000	0 / 0.225	0 / 1.002	1 / 2.391	- / -	- / -	0 / 0.000	1 / 3.618
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	0 / 0.225	0 / 0.000	0 / 0.225	0 / 1.002	1 / 2.391	- / -	- / -	0 / 0.000	1 / 3.618

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1

Footnotes:

(11) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 6 / Ballast and DC Console
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

This system was broken out from the PACS line, as they were previously combined, incorrectly. These are still included in the PACS line (exhibit 5). This system was segregated as it is a one off for the LHD 8 install in FY26, the remaining PACS efforts are accomplished concurrently and apply to LHDs 1-7. The prior year funding was combined in the PACS line, the quantities remained constant as the Ballast and Damage Control Console systems are installed with PACS.

(12) Increase required due to two concurrent installations requiring additional engineering services.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 7 / Ship Control System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	14.211	11.157	5.740	7.156	0.000	7.156	3.468	0.000	0.000	0.000	5.967	47.699
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	14.211	11.157	5.740	7.156	0.000	7.156	3.468	0.000	0.000	0.000	5.967	47.699
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**14.211**	**11.157**	**5.740**	**7.156**	**0.000**	**7.156**	**3.468**	**0.000**	**0.000**	**0.000**	**5.967**	**47.699**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

(P40A) SCS-GOV (LHD7/8, LHA 6/7): The Ship Control System-Government (SCS-GOV) supports the standardization of hardware, software and design of the surface ship Ship Control Systems (SCS) to address hardware and software obsolescence issues. The installation will bring commonality across the LHD 1-8 and LHA-6 hulls. SCS-GOV replaces the analog Ship Control System (SCS) with a digital SCS. Analog systems are very maintenance intensive constantly requiring alignment of the amplifiers, indicators, and other transmitting devices. The existing system is also largely obsolete requiring cannibalization from decommissioned ships.

[SCS- GOV PROCUREMENT]

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 7 / Ship Control System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Ship Control System												
B Kits												
Recurring												
2.1.1) SCS- GOV PROCUREMENT - NonOrganic (13)	3 / 4.945	2 / 3.016	1 / 1.331	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.947	7 / 11.239
Subtotal: Recurring	*- / 4.945*	*- / 3.016*	*- / 1.331*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.947*	*- / 11.239*
Subtotal: Ship Control System	*3 / 4.945*	*2 / 3.016*	*1 / 1.331*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 1.947*	*7 / 11.239*
Subtotal: Procurement, All Modification Items	*- / 4.945*	*- / 3.016*	*- / 1.331*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.947*	*- / 11.239*
Support *(All Modification Items)*												
3.1) ENGINEERING SERVICES	- / 1.088	- / 1.135	- / 0.579	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.802
3.2) Alteration NRE	- / -	- / 0.387	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.387
Subtotal: Support	*- / 1.088*	*- / 1.522*	*- / 0.579*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.189*
Installation												
Modification Item 1 of 1: Ship Control System	- / 8.178	- / 6.619	- / 3.830	- / 7.156	- / 0.000	- / 7.156	- / 3.468	- / 0.000	- / 0.000	- / 0.000	- / 4.020	- / 33.271
Subtotal: Installation	*- / 8.178*	*- / 6.619*	*- / 3.830*	*- / 7.156*	*- / -*	*- / 7.156*	*- / 3.468*	*- / -*	*- / -*	*- / -*	*- / 4.020*	*- / 33.271*
Total												
Total Cost (Procurement + Support + Installation)	**14.211**	**11.157**	**5.740**	**7.156**	**0.000**	**7.156**	**3.468**	**0.000**	**0.000**	**0.000**	**5.967**	**47.699**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 7 / Ship Control System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Ship Control System

Manufacturer Information

Manufacturer Name: L3	Manufacturer Location: New York, New York
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022	Jun 2023					
Delivery Dates	Jun 2024	Jun 2025					

Installation Information

Method of Implementation: [none specified]:: Installation Name: SCS- GOV PROCUREMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 8.178	2 / 6.257	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 14.435
FY 2022	- / -	0 / 0.362	0 / 3.483	2 / 5.885	0 / 0.000	2 / 5.885	- / -	- / -	- / -	- / -	0 / 0.000	2 / 9.730
FY 2023	- / -	- / -	0 / 0.347	0 / 1.271	0 / 0.000	0 / 1.271	1 / 3.468	- / -	- / -	- / -	0 / 0.000	1 / 5.086
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.020	1 / 4.020
Total	1 / 8.178	2 / 6.619	0 / 3.830	2 / 7.156	0 / 0.000	2 / 7.156	1 / 3.468	- / -	- / -	- / -	1 / 4.020	7 / 33.271

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	2	-	-	-	-	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	7
Out	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-	-	1	7

Footnotes:

(13) Installation/procurement costs vary because the scope of work on LHD8, LHA 6-7 varies from LHD 1-7. Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 7 / Ship Control System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 8 / High Efficiency Super Capacity (HES-C) Chiller
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	23.816	24.766	22.670	133.302	204.554
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	23.816	24.766	22.670	133.302	204.554
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**23.816**	**24.766**	**22.670**	**133.302**	**204.554**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This is a new requirement beginning in FY26. The High Efficiency Super Capacity (HES-C) Chiller increases the cooling capacity onboard LHD class ships to regain cooling margin to support critical loads. Increased cooling capacity is required for critical combat system operations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 8 / High Efficiency Super Capacity (HES-C) Chiller
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: High Efficiency Super Capacity (HES-C) Chiller												
B Kits												
Recurring												
1.1.1) High Efficiency Super Capacity (HES-C) Chiller - NonOrganic (14)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 19.102	1 / 19.445	- / -	2 / 45.664	4 / 84.211
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.102*	*- / 19.445*	*- / -*	*- / 45.664*	*- / 84.211*
Subtotal: High Efficiency Super Capacity (HES-C) Chiller	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 19.102*	*1 / 19.445*	*- / -*	*2 / 45.664*	*4 / 84.211*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.102*	*- / 19.445*	*- / -*	*- / 45.664*	*- / 84.211*
Support *(All Modification Items)*												
2.1) NRE	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.000	- / 1.000	- / -	- / -	- / 2.000
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.000*	*- / 1.000*	*- / -*	*- / 0.000*	*- / 2.000*
Installation												
Modification Item 1 of 1: High Efficiency Super Capacity (HES-C) Chiller	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.714	- / 4.321	- / 22.670	- / 87.638	- / 118.343
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 3.714*	*- / 4.321*	*- / 22.670*	*- / 87.638*	*- / 118.343*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**23.816**	**24.766**	**22.670**	**133.302**	**204.554**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 8 / High Efficiency Super Capacity (HES-C) Chiller

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: High Efficiency Super Capacity (HES-C) Chiller

Manufacturer Information

Manufacturer Name: VARIOUS | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates					Dec 2025	Jun 2027	
Delivery Dates					Dec 2027	Aug 2029	

Installation Information

Method of Implementation: Industrial:: Installation Name: High Efficiency Super Capacity (HES-C) Chiller

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.714	0 / 0.540	1 / 22.120	0 / 0.000	1 / 26.374
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.781	0 / 0.550	1 / 22.923	1 / 27.254
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 64.715	2 / 64.715
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.714	0 / 4.321	1 / 22.670	3 / 87.638	4 / 118.343

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	3	4
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4

Footnotes:

(14) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 8 / High Efficiency Super Capacity (HES-C) Chiller
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. There are separate actions within FY26 and FY27 that must be accomplished prior to installation, all of which are hull specific and estimated as such. These include ship checks, ship installation drawing completion, logistics, and hull specific engineering to ensure quality installation.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 5 / Propulsion and Auxiliary Control System (PACS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	29.324	36.975	3.804	24.966	0.000	24.966	24.458	2.955	22.221	0.000	0.000	144.703
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	29.324	36.975	3.804	24.966	0.000	24.966	24.458	2.955	22.221	0.000	0.000	144.703
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**29.324**	**36.975**	**3.804**	**24.966**	**0.000**	**24.966**	**24.458**	**2.955**	**22.221**	**0.000**	**0.000**	**144.703**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[Propulsion and Auxiliary Control System (PACS) procurement] Description: Propulsion and Auxiliary Control System (PACS) provides a network infrastructure for Hull, Mechanical & Electrical Systems to operate on that provides the operator necessary situational awareness of the engineering plant. It will improve functionality for Fluid Control Systems (FCS), Fire Protection Systems and Interior Communication/ System Monitoring (IC/SM) alarm switchboard, which are severely degraded or inoperable across the LHD Class due to obsolescence. PACS must be installed prior to or conjunctively with Damage Control/ Ballast Control Console Upgrade, which is a Class Safety Alteration.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 5 / Propulsion and Auxiliary Control System (PACS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Propulsion and Auxiliary Control System (PACS)												
B Kits												
Recurring												
1.1.1) Propulsion and Auxiliary Control System (PACS) procurement - NonOrganic [15]	2 / 20.434	2 / 16.712	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 37.146
Subtotal: Recurring	*- / 20.434*	*- / 16.712*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 37.146*
Subtotal: Propulsion and Auxiliary Control System (PACS)	*2 / 20.434*	*2 / 16.712*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*4 / 37.146*
Subtotal: Procurement, All Modification Items	*- / 20.434*	*- / 16.712*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 37.146*
Support *(All Modification Items)*												
2.1) Propulsion and Auxilary Control System (PACS) Eng Services [16]	- / 2.761	- / 5.554	- / 2.101	- / 2.353	- / -	- / 2.353	- / 2.797	- / 1.524	- / -	- / -	- / -	- / 17.090
Subtotal: Support	*- / 2.761*	*- / 5.554*	*- / 2.101*	*- / 2.353*	*- / -*	*- / 2.353*	*- / 2.797*	*- / 1.524*	*- / -*	*- / -*	*- / 0.000*	*- / 17.090*
Installation												
Modification Item 1 of 1: Propulsion and Auxiliary Control System (PACS)	- / 6.129	- / 14.709	- / 1.703	- / 22.613	- / 0.000	- / 22.613	- / 21.661	- / 1.431	- / 22.221	- / 0.000	- / 0.000	- / 90.467
Subtotal: Installation	*- / 6.129*	*- / 14.709*	*- / 1.703*	*- / 22.613*	*- / -*	*- / 22.613*	*- / 21.661*	*- / 1.431*	*- / 22.221*	*- / -*	*- / 0.000*	*- / 90.467*
Total												
Total Cost (Procurement + Support + Installation)	**29.324**	**36.975**	**3.804**	**24.966**	**0.000**	**24.966**	**24.458**	**2.955**	**22.221**	**0.000**	**0.000**	**144.703**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 5 / Propulsion and Auxiliary Control System (PACS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: Propulsion and Auxiliary Control System (PACS)

Manufacturer Information

Manufacturer Name: VARIOUS | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jun 2022						
Delivery Dates	Jun 2024						

Installation Information

Method of Implementation: Industrial:: Installation Name: Propulsion and Auxiliary Control System (PACS) procurement

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 6.129	1 / 14.032	0 / 1.703	1 / 21.110	0 / 0.000	1 / 21.110	- / -	- / -	- / -	- / -	0 / 0.000	2 / 42.974
FY 2022	- / -	0 / 0.677	- / -	0 / 1.503	0 / 0.000	0 / 1.503	1 / 21.661	0 / 1.431	1 / 22.221	- / -	0 / 0.000	2 / 47.493
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 6.129	1 / 14.709	0 / 1.703	1 / 22.613	0 / 0.000	1 / 22.613	1 / 21.661	0 / 1.431	1 / 22.221	- / -	0 / 0.000	4 / 90.467

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	4
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	1	-	4

Footnotes:

(15) The higher engineering services costs prior to first install in FY22 are due to non-reoccurring engineering costs, which include first article environmental quality testing and engineering lab setup to support software development and Risk Management Framework Certification. Installation costs will vary because the scope of install differs between LHD 1-4 and LHD 5-7. Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 5 / Propulsion and Auxiliary Control System (PACS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. Two prior year procurements were made, one installing on time in FY22. Due to SID delivery delays and availability shifts, one installation will occur in FY24. Both procurements made in FY22 had delayed installations due to availability shifts. One installation will occur in FY25, the other in FY27. The PACS system now includes Ballast and DC Console, with the exception of LHD 8 only receiving the Ballast and DC Console. This is because the systems are installed concurrently. Actual costs were received in FY22 (first time install) and they were significantly higher than original IGEs. The cost increases in FY24 take into account the increased scope of combining Ballast and DC Consoles as well as the actual costs received in FY22. Prior year funding has been updated to account for reduction of Ballast and Damage Control Console procurements as they are now to be installed as part of the PACS overall system in this line.

(16) Engineering services increased in FY22 due to increase in planning for two installations as well as program control adjustments in FY22 and FY23.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 9 / Modular Refrigeration System (MRS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.350	0.491	7.348	48.018	58.207
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.350	0.491	7.348	48.018	58.207
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**2.350**	**0.491**	**7.348**	**48.018**	**58.207**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This is a new requirement in DON24 with funding beginning in F26. The Modular Refrigeration System (MRS) modernizes the reefer systems onboard LHD and LHA class ships. This upgrade removes obsolete refrigerant from use as well as lowers total ownership costs, maintenance costs, and increases reefer unit availability.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 9 / Modular Refrigeration System (MRS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Modular Refrigeration System (MRS)												
A Kits												
Recurring												
1.1.1) Modular Refrigeration System - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.219	- / -	- / -	4 / 10.607	5 / 12.826
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.219*	*- / -*	*- / -*	*- / 10.607*	*- / 12.826*
Subtotal: Modular Refrigeration System (MRS)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 2.219*	*- / -*	*- / -*	*4 / 10.607*	*5 / 12.826*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.219*	*- / -*	*- / -*	*- / 10.607*	*- / 12.826*
Installation												
Modification Item 1 of 1: Modular Refrigeration System (MRS)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.131	- / 0.491	- / 7.348	- / 37.411	- / 45.381
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.131*	*- / 0.491*	*- / 7.348*	*- / 37.411*	*- / 45.381*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**2.350**	**0.491**	**7.348**	**48.018**	**58.207**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 9 / Modular Refrigeration System (MRS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Modular Refrigeration System (MRS)

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates					Jan 2026		
Delivery Dates					Jan 2028		

Installation Information

Method of Implementation: Industrial:: Installation Name: Modular Refrigeration System

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.131	0 / 0.491	1 / 7.348	0 / 0.000	1 / 7.970
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 37.411	4 / 37.411
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.131	0 / 0.491	1 / 7.348	4 / 37.411	5 / 45.381

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	4	5
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 10 / HYDRA
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	22.328	5.229	0.000	8.364	0.000	8.364	7.836	9.328	8.133	7.973	4.648	73.839
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	22.328	5.229	0.000	8.364	0.000	8.364	7.836	9.328	8.133	7.973	4.648	73.839
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**22.328**	**5.229**	**0.000**	**8.364**	**0.000**	**8.364**	**7.836**	**9.328**	**8.133**	**7.973**	**4.648**	**73.839**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Hierarchical Yet Dynamically Reprogrammable Architecture (HYDRA) modernization replaces the unsupported P7100/MRK fixed and portable radios with new XG-75 radios and Radiating Transmission Lines (RTL) that incorporates industry standard Association of Public Safety Communications Official (APCO) P-25 signaling protocols. The new system with maintain vital, below deck, wireless communications that enable ship's force to coordinate amphibious, aviation, force protection and damage control operations safely. HYDRA modernization will establish commonality across CG, CVN, LPD and LSD Ship Classes.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 10 / HYDRA
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: HYDRA												
B Kits												
Recurring												
1.1.1) HYDRA - NonOrganic (17)	4 / 19.787	- / -	- / -	1 / 3.048	- / -	1 / 3.048	1 / 3.132	1 / 3.770	1 / 3.216	- / -	- / -	8 / 32.953
Subtotal: Recurring	*- / 19.787*	*- / -*	*- / -*	*- / 3.048*	*- / -*	*- / 3.048*	*- / 3.132*	*- / 3.770*	*- / 3.216*	*- / -*	*- / 0.000*	*- / 32.953*
Subtotal: HYDRA	*4 / 19.787*	*- / -*	*- / -*	*1 / 3.048*	*- / -*	*1 / 3.048*	*1 / 3.132*	*1 / 3.770*	*1 / 3.216*	*- / -*	*- / -*	*8 / 32.953*
Subtotal: Procurement, All Modification Items	*- / 19.787*	*- / -*	*- / -*	*- / 3.048*	*- / -*	*- / 3.048*	*- / 3.132*	*- / 3.770*	*- / 3.216*	*- / -*	*- / 0.000*	*- / 32.953*
Installation												
Modification Item 1 of 1: HYDRA	- / 2.541	- / 5.229	- / 0.000	- / 5.316	- / 0.000	- / 5.316	- / 4.704	- / 5.558	- / 4.917	- / 7.973	- / 4.648	- / 40.886
Subtotal: Installation	*- / 2.541*	*- / 5.229*	*- / -*	*- / 5.316*	*- / -*	*- / 5.316*	*- / 4.704*	*- / 5.558*	*- / 4.917*	*- / 7.973*	*- / 4.648*	*- / 40.886*
Total												
Total Cost (Procurement + Support + Installation)	**22.328**	**5.229**	**0.000**	**8.364**	**0.000**	**8.364**	**7.836**	**9.328**	**8.133**	**7.973**	**4.648**	**73.839**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 10 / HYDRA
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: HYDRA

Manufacturer Information

Manufacturer Name: Harris Corporation	Manufacturer Location: Lynchburg, VA
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates			Jun 2024	Jun 2025	May 2026	Jun 2027	
Delivery Dates			Feb 2026	Feb 2027	Jan 2028	Feb 2029	

Installation Information

Method of Implementation: [none specified]:: Installation Name: HYDRA

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 2.541	1 / 5.229	- / -	1 / 5.147	0 / 0.000	1 / 5.147	1 / 3.608	- / -	- / -	- / -	0 / 0.000	4 / 16.525
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	0 / 0.169	0 / 0.000	0 / 0.169	0 / 0.924	1 / 4.405	- / -	- / -	0 / 0.000	1 / 5.498
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.172	0 / 0.978	1 / 3.732	- / -	0 / 0.000	1 / 4.882
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.175	0 / 1.007	1 / 6.997	0 / 0.000	1 / 8.179
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.178	0 / 0.976	1 / 4.648	1 / 5.802
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 2.541	1 / 5.229	- / -	1 / 5.316	0 / 0.000	1 / 5.316	1 / 4.704	1 / 5.558	1 / 4.917	1 / 7.973	1 / 4.648	8 / 40.886

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	1	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	1	-	1	-	-	-	1	-	-	-	1	8
Out	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	1	-	-	2	8

Footnotes:

(17) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 10 / HYDRA
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. The LHD 7 HYDRA installation costs increased over IGE by $2.5M in FY22.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 11 / Amplified Announcing System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	13.823	2.147	0.036	4.086	0.000	4.086	4.223	4.232	4.323	2.108	2.000	36.978
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	13.823	2.147	0.036	4.086	0.000	4.086	4.223	4.232	4.323	2.108	2.000	36.978
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**13.823**	**2.147**	**0.036**	**4.086**	**0.000**	**4.086**	**4.223**	**4.232**	**4.323**	**2.108**	**2.000**	**36.978**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

General Announcing upgrade replaces the obsolete 1/2/3/5/6/10MC Announcing Systems with a common, survival Digital Integrated Announcing System (DIAS), which has been installed on the DDG and CG Classes during midlife modernization. Existing announcing systems are riddled with obsolescence that degrades performance and presents a safety concern, during shipboard operations and casualties. This is a capability required in the LHD Required Operational Capabilities (ROC) document.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 11 / Amplified Announcing System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Amplified Announcing System												
B Kits												
Non-Recurring												
2.2.1) AMPLIFIED ANNOUNCING SYSTEM PROCUREMENTS - NonOrganic (18)	4 / 11.349	- / -	- / -	1 / 2.083	- / -	1 / 2.083	1 / 2.121	1 / 2.159	1 / 2.213	- / -	- / -	8 / 19.925
Subtotal: Non-Recurring	*- / 11.349*	*- / -*	*- / -*	*- / 2.083*	*- / -*	*- / 2.083*	*- / 2.121*	*- / 2.159*	*- / 2.213*	*- / -*	*- / 0.000*	*- / 19.925*
Subtotal: Amplified Announcing System	*4 / 11.349*	*- / -*	*- / -*	*1 / 2.083*	*- / -*	*1 / 2.083*	*1 / 2.121*	*1 / 2.159*	*1 / 2.213*	*- / -*	*- / -*	*8 / 19.925*
Subtotal: Procurement, All Modification Items	*- / 11.349*	*- / -*	*- / -*	*- / 2.083*	*- / -*	*- / 2.083*	*- / 2.121*	*- / 2.159*	*- / 2.213*	*- / -*	*- / 0.000*	*- / 19.925*
Installation												
Modification Item 1 of 1: Amplified Announcing System	- / 2.474	- / 2.147	- / 0.036	- / 2.003	- / 0.000	- / 2.003	- / 2.102	- / 2.073	- / 2.110	- / 2.108	- / 2.000	- / 17.053
Subtotal: Installation	*- / 2.474*	*- / 2.147*	*- / 0.036*	*- / 2.003*	*- / -*	*- / 2.003*	*- / 2.102*	*- / 2.073*	*- / 2.110*	*- / 2.108*	*- / 2.000*	*- / 17.053*
Total												
Total Cost (Procurement + Support + Installation)	**13.823**	**2.147**	**0.036**	**4.086**	**0.000**	**4.086**	**4.223**	**4.232**	**4.323**	**2.108**	**2.000**	**36.978**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 11 / Amplified Announcing System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Amplified Announcing System

Manufacturer Information

Manufacturer Name: Dynalec Corporation	Manufacturer Location: Sodus, NY
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates			Jun 2024	Jun 2025	May 2026	Jun 2027	
Delivery Dates			Feb 2026	Feb 2027	Jan 2028	Feb 2029	

Installation Information

Method of Implementation: [none specified]:: Installation Name: AMPLIFIED ANNOUNCING SYSTEM PROCUREMENTS

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 2.474	1 / 2.147	0 / 0.036	1 / 1.834	0 / 0.000	1 / 1.834	1 / 1.930	- / -	- / -	- / -	0 / 0.000	4 / 8.421
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	0 / 0.169	0 / 0.000	0 / 0.169	0 / 0.134	1 / 1.898	- / -	- / -	0 / 0.000	1 / 2.201
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.038	0 / 0.137	1 / 1.932	- / -	0 / 0.000	1 / 2.107
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.038	0 / 0.139	1 / 1.966	0 / 0.000	1 / 2.143
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.039	0 / 0.142	1 / 2.000	1 / 2.181
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 2.474	1 / 2.147	0 / 0.036	1 / 2.003	0 / 0.000	1 / 2.003	1 / 2.102	1 / 2.073	1 / 2.110	1 / 2.108	1 / 2.000	8 / 17.053

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	1	-	1	-	-	-	1	-	-	-	1	8
Out	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	1	-	1	-	-	2	8

Footnotes:

(18) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 11 / Amplified Announcing System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

One prior year procurement was planned for installation on LHD 2 in FY22, however due to ship installation drawing issues prevented installation. Install was moved to FY26 SRA, planned to award installation contract in FY25 due to A-120 milestone for installation awards. One prior year procurement was made for LHD 4 installation in FY20 however, however due to ship installation drawing issues prevented installation. Install was moved to FY25 SRA, planned to award installation contract in FY24 due to A-120 milestone for installation awards.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 12 / DCSS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2.425	0.000	0.000	0.000	0.000	0.000	0.000	1.355	1.638	0.606	3.341	9.365
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2.425	0.000	0.000	0.000	0.000	0.000	0.000	1.355	1.638	0.606	3.341	9.365
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2.425**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1.355**	**1.638**	**0.606**	**3.341**	**9.365**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Digital Defense Communications Subsystem (DCSS) Upgrade: Replaces four full size, 23", obsolete cabinets on LHD 5-7 and two full size, 23", legacy cabinets on LHD 8 and LHA 6 with two 2U,19" rack mountable IP conference servers. Exterior net terminals and interior non-operational or materially deficient net terminals will be replaced.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 12 / DCSS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DCSS												
B Kits												
Non-Recurring												
2.2.1) DIGITAL DCSS UPDRADE PROCUREMENT - NonOrganic (19)	1 / 1.025	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.279	1 / 1.283	- / -	1 / 1.300	4 / 4.887
Subtotal: Non-Recurring	*- / 1.025*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.279*	*- / 1.283*	*- / -*	*- / 1.300*	*- / 4.887*
Subtotal: DCSS	*1 / 1.025*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 1.279*	*1 / 1.283*	*- / -*	*1 / 1.300*	*4 / 4.887*
Subtotal: Procurement, All Modification Items	*- / 1.025*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.279*	*- / 1.283*	*- / -*	*- / 1.300*	*- / 4.887*
Installation												
Modification Item 1 of 1: DCSS	- / 1.400	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.076	- / 0.355	- / 0.606	- / 2.041	- / 4.478
Subtotal: Installation	*- / 1.400*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.076*	*- / 0.355*	*- / 0.606*	*- / 2.041*	*- / 4.478*
Total												
Total Cost (Procurement + Support + Installation)	**2.425**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1.355**	**1.638**	**0.606**	**3.341**	**9.365**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 12 / DCSS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DCSS

Manufacturer Information

Manufacturer Name: AVAYA Federal Solutions, INC.	Manufacturer Location: Fairfax, VA
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 22

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates					Feb 2026	Jun 2027	
Delivery Dates					Dec 2027	Apr 2029	

Installation Information

Method of Implementation: [none specified]:: Installation Name: DIGITAL DCSS UPDRADE PROCUREMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 1.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.400
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.076	0 / 0.278	1 / 0.323	0 / 0.000	1 / 0.677
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.077	0 / 0.283	1 / 0.328	1 / 0.688
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.713	1 / 1.713
Total	1 / 1.400	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.076	0 / 0.355	1 / 0.606	2 / 2.041	4 / 4.478

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	4
Out	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4

Footnotes:

(19) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 13 / ICT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	7.412	0.000	0.036	0.132	0.000	0.132	1.643	1.157	0.815	0.687	2.164	14.046
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	7.412	0.000	0.036	0.132	0.000	0.132	1.643	1.157	0.815	0.687	2.164	14.046
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**7.412**	**0.000**	**0.036**	**0.132**	**0.000**	**0.132**	**1.643**	**1.157**	**0.815**	**0.687**	**2.164**	**14.046**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Integrated Communication Terminals (ICT) upgrade replaces the antiquated system with a Commercial off-the-Shelf digital system that improves both internal and external communications with the ship necessary to meeting USMC requirements for executing operations. The system incorporates hardware installed on the LCS, CVN-78 and CVN-68 classes, reducing supportability and training requirements for the fleet. This upgrade is necessary for Digital Conference Switch System (DCSS) and Integrated Voice Network System upgrades to be implemented.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 13 / ICT
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ICT												
B Kits												
Non-Recurring												
2.2.1) ICT UPGRADE (SCD14785) PROCUREMENT - NonOrganic (20)	2 / 6.213	- / -	- / -	- / -	- / -	- / -	1 / 0.965	1 / 0.982	- / -	- / -	1 / 1.174	5 / 9.334
Subtotal: Non-Recurring	*- / 6.213*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.965*	*- / 0.982*	*- / -*	*- / -*	*- / 1.174*	*- / 9.334*
Subtotal: ICT	*2 / 6.213*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 0.965*	*1 / 0.982*	*- / -*	*- / -*	*1 / 1.174*	*5 / 9.334*
Subtotal: Procurement, All Modification Items	*- / 6.213*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.965*	*- / 0.982*	*- / -*	*- / -*	*- / 1.174*	*- / 9.334*
Installation												
Modification Item 1 of 1: ICT	- / 1.199	- / 0.000	- / 0.036	- / 0.132	- / 0.000	- / 0.132	- / 0.678	- / 0.175	- / 0.815	- / 0.687	- / 0.990	- / 4.712
Subtotal: Installation	*- / 1.199*	*- / -*	*- / 0.036*	*- / 0.132*	*- / -*	*- / 0.132*	*- / 0.678*	*- / 0.175*	*- / 0.815*	*- / 0.687*	*- / 0.990*	*- / 4.712*
Total												
Total Cost (Procurement + Support + Installation)	**7.412**	**0.000**	**0.036**	**0.132**	**0.000**	**0.132**	**1.643**	**1.157**	**0.815**	**0.687**	**2.164**	**14.046**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 13 / ICT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: ICT

Manufacturer Information

Manufacturer Name: Dynalec Corporation	Manufacturer Location: Sodus, NY
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates				Jun 2025	Mar 2026		
Delivery Dates				Feb 2027	Nov 2027		

Installation Information

Method of Implementation: [none specified]:: Installation Name: ICT UPGRADE (SCD14785) PROCUREMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 1.199	- / -	0 / 0.036	0 / 0.132	0 / 0.000	0 / 0.132	1 / 0.643	- / -	- / -	- / -	0 / 0.000	2 / 2.010
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.035	0 / 0.137	1 / 0.676	- / -	0 / 0.000	1 / 0.848
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.038	0 / 0.139	1 / 0.687	0 / 0.000	1 / 0.864
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.990	1 / 0.990
Total	1 / 1.199	- / -	0 / 0.036	0 / 0.132	0 / 0.000	0 / 0.132	1 / 0.678	0 / 0.175	1 / 0.815	1 / 0.687	1 / 0.990	5 / 4.712

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	1	-	-	-	1	5
Out	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	2	5

Footnotes:

(20) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 14 / IVN
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	4.487	0.000	0.102	0.373	0.000	0.373	8.346	0.386	1.795	0.000	10.100	25.589
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	4.487	0.000	0.102	0.373	0.000	0.373	8.346	0.386	1.795	0.000	10.100	25.589
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**4.487**	**0.000**	**0.102**	**0.373**	**0.000**	**0.373**	**8.346**	**0.386**	**1.795**	**0.000**	**10.100**	**25.589**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Integrated Voice Network (IVN) upgrade replaces the legacy Ship Service Telephone System (SSTS) with a ruggedized digital communication system that provides command and control communications for tactical employment of forces. The new system will bring LHDs into alignment with LPD, LSD and LCC modernization.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 14 / IVN
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: IVN												
B Kits												
Non-Recurring												
2.2.1) IVN UPGRADE - NonOrganic (21)	1 / 3.171	- / -	- / -	- / -	- / -	- / -	1 / 6.586	- / -	- / -	- / -	1 / 7.450	3 / 17.207
Subtotal: Non-Recurring	*- / 3.171*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.586*	*- / -*	*- / -*	*- / -*	*- / 7.450*	*- / 17.207*
Subtotal: IVN	*1 / 3.171*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 6.586*	*- / -*	*- / -*	*- / -*	*1 / 7.450*	*3 / 17.207*
Subtotal: Procurement, All Modification Items	*- / 3.171*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.586*	*- / -*	*- / -*	*- / -*	*- / 7.450*	*- / 17.207*
Installation												
Modification Item 1 of 1: IVN	- / 1.316	- / 0.000	- / 0.102	- / 0.373	- / 0.000	- / 0.373	- / 1.760	- / 0.386	- / 1.795	- / 0.000	- / 2.650	- / 8.382
Subtotal: Installation	*- / 1.316*	*- / -*	*- / 0.102*	*- / 0.373*	*- / -*	*- / 0.373*	*- / 1.760*	*- / 0.386*	*- / 1.795*	*- / -*	*- / 2.650*	*- / 8.382*
Total												
Total Cost (Procurement + Support + Installation)	**4.487**	**0.000**	**0.102**	**0.373**	**0.000**	**0.373**	**8.346**	**0.386**	**1.795**	**0.000**	**10.100**	**25.589**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 14 / IVN
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: IVN

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates				Jun 2025			
Delivery Dates				Feb 2027			

Installation Information

Method of Implementation: Industrial:: Installation Name: IVN UPGRADE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 1.316	- / -	0 / 0.102	0 / 0.373	0 / 0.000	0 / 0.373	1 / 1.580	- / -	- / -	- / -	0 / 0.000	1 / 3.371
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.180	0 / 0.386	1 / 1.795	- / -	0 / 0.000	1 / 2.361
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.650	1 / 2.650
Total	0 / 1.316	- / -	0 / 0.102	0 / 0.373	0 / 0.000	0 / 0.373	1 / 1.760	0 / 0.386	1 / 1.795	- / -	1 / 2.650	3 / 8.382

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	1	3
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	3

Footnotes:

(21) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 15 / IVCN
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	7.329	0.000	0.000	0.000	0.000	0.000	0.000	6.054	6.441	2.008	1.755	23.587
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	7.329	0.000	0.000	0.000	0.000	0.000	0.000	6.054	6.441	2.008	1.755	23.587
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**7.329**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**6.054**	**6.441**	**2.008**	**1.755**	**23.587**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[IVCN Tech Refresh] Integrated Voice Communications Network (IVCN) Tech Refresh unifies three obsolete communication servers into a single, redundant distributed IP network that will enable expanded communication capabilities for command and control. The refresh will incorporate a wireless, digital telephone system that will improve coordination between shipboard personnel.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 15 / IVCN
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: IVCN												
B Kits												
Non-Recurring												
2.2.1) IVCN Tech Refresh - NonOrganic (22)	1 / 4.877	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.978	1 / 6.086	- / -	- / -	3 / 16.941
Subtotal: Non-Recurring	*- / 4.877*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.978*	*- / 6.086*	*- / -*	*- / 0.000*	*- / 16.941*
Subtotal: IVCN	*1 / 4.877*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 5.978*	*1 / 6.086*	*- / -*	*- / -*	*3 / 16.941*
Subtotal: Procurement, All Modification Items	*- / 4.877*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.978*	*- / 6.086*	*- / -*	*- / 0.000*	*- / 16.941*
Installation												
Modification Item 1 of 1: IVCN	- / 2.452	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.076	- / 0.355	- / 2.008	- / 1.755	- / 6.646
Subtotal: Installation	*- / 2.452*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.076*	*- / 0.355*	*- / 2.008*	*- / 1.755*	*- / 6.646*
Total												
Total Cost (Procurement + Support + Installation)	**7.329**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**6.054**	**6.441**	**2.008**	**1.755**	**23.587**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife	**Modification Number / Title:** 15 / IVCN
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: IVCN

Manufacturer Information

Manufacturer Name: AVAYA Federal Solutions, INC.	Manufacturer Location: Fairfax, VA
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates					May 2026	Jun 2027	
Delivery Dates					Jan 2028	Feb 2029	

Installation Information

Method of Implementation: [none specified]:: Installation Name: IVCN Tech Refresh

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 2.452	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.452
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.076	0 / 0.278	1 / 1.725	0 / 0.000	1 / 2.079
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.077	0 / 0.283	1 / 1.755	1 / 2.115
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 2.452	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.076	0 / 0.355	1 / 2.008	1 / 1.755	3 / 6.646

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	3
Out	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3

Footnotes:

(22) Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	40.194	1.401	20.028	10.529	0.000	10.529	7.351	20.370	20.778	21.198	-	141.849
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	40.194	1.401	20.028	10.529	0.000	10.529	7.351	20.370	20.778	21.198	-	141.849
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**40.194**	**1.401**	**20.028**	**10.529**	**0.000**	**10.529**	**7.351**	**20.370**	**20.778**	**21.198**	**-**	**141.849**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2024 budget provides funding for Extended Service Life Program (ESLP) targeted modernization of various HM&E systems onboard LCC 19 hull. Some major modernization efforts include Integrated Voice Network (IVN), General Announcing System, 21/24MC CAPT/FLAG CMD Intercom Replacement, Ship Control System (SCS) Modernization, and Pilot House Redesign.

[P40A / SS/EDG Genset Upgrade]: The Ship Service Generator upgrades replace the #1SS/EDG, #2SS/EDG, and #3SSDG with a 2000KW unit, similar to the existing #3SSDG but shock qualified, and accomplish necessary distribution modifications. This replacement will add an additional 2675KW to the Diesel generating plant and will provide the additional capacity to ensure there is ample power to support full ship's functions/C4I capabilities on a continuous basis. The design will also include the installation of dual redundant voltage regulators.

[P40A / IVN Upgrade]: Integrated Voice Network (IVN) upgrade replaces the legacy Ship Service Telephone System with ruggedized communications system that provides command and control communications for tactical employment of forces. The new system will bring LCC 19 into alignment wit LPD, LAD, and LHD modernization.

[P40A / General Announcing System Upgrade]: The General Announcing System upgrade replaces currently installed 1/3/6 MC Announcing Systems with the AN/SIA-129 Digital Integrated Announcing System to provide a technology refresh and enhancement for the 1/3/6 MC one-way announcing systems.

[P40A / 21/24MC CAPT/FLAG CMD Intercom Replacement]: The 21/24 MC CAPT/FLAG CMD Intercom upgrade removes and replaces the existing obsolete and unreliable 23MC and 26MC intercom units with a Commercial Off The Shelf (COTS) solution.

[P40A / Ship Control System (SCS) Modernization]: The Ship Control System upgrade will replace the existing, analog ship control equipment in the Pilot House, Steering Gear Room and Engine Order Station with digital equivalents. This change is being driven primarily to address obsolescence issues but will also provide additional redundancy, accuracy, capability, alarm management and will reduce maintenance workload for ship's force.

[P40A / Pilot House Redesign]: The Pilothouse Redesign upgrade replaces existing Bridge layout for improved navigational operations and watchstander capability.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / LD002 LCC 19 Extended Service Life Program]: The ESLP modernization package upgrades or replaces existing Degaussing, Automation Controllers, Automatic and Manual Bus Transfer Switches/ Breakers, Water Heater, Desalinators, Boiler Water Level Indicators, Main Feed Pumps, Programmatic Logic Console, Lube Oil Control and Steam Plant Control for safety, elimination of obsolescence challenges, enhanced operational reliability, improved watchstander capability, and improvement of systems and equipment to meet end of service life.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	LCC 19/20 Extended Service Life Program				- / 40.194	- / 1.401	- / 4.481	- / 10.178	- / -	- / 10.178
P-3a	1 / LCC 19/20 EXTENDED SERVICE LIFE PROGRAM (TBD)				- / 0.000	- / 0.000	- / 15.547	- / 0.351	- / 0.000	- / 0.351
P-40	**Total Gross/Weapon System Cost**				**- / 40.194**	**- / 1.401**	**- / 20.028**	**- / 10.529**	**- / 0.000**	**- / 10.529**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	LCC 19/20 Extended Service Life Program				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / LCC 19/20 EXTENDED SERVICE LIFE PROGRAM (TBD)				- / 4.981	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 20.879
P-40	**Total Gross/Weapon System Cost**				**- / 7.351**	**- / 20.370**	**- / 20.778**	**- / 21.198**	**- / -**	**- / 141.849**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program	**Aggregated Items Title:** LCC 19/20 Extended Service Life Program

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) LCC 20 Propulsion Main Shaft																				
1.1) LCC 20 Propulsion Main Shaft Battle Spare	A		3,279K	1	3.279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) LCC 20 Propulsion Main Shaft			**-**	**-**	***3.279***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) Prior Year Funding																				
2.1) LD001 - LCC19 VS-50+Oil Water Separator	A		-	-	1.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) LD001 - LCC20 Electrical Improvements	A		-	-	6.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) Prior Year Funding			**-**	**-**	***7.800***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) Ship Electrical Improvements (1)																				
3.1) SS/EDG Genset Upgrade	A		-	-	-	-	-	0.525	-	-	-	-	-	-	-	-	-	-	-	-
3.2) IVN Upgrade (2)	A		-	-	-	-	-	0.610	-	-	-	-	-	5.100	-	-	-	-	-	5.100
3.3) General Announcing System Upgrade (3)	A		-	-	29.115	-	-	-	-	-	0.589	-	-	1.162	-	-	-	-	-	1.162
3.4) 21/24MC CAPT/ FLAG CMD Intercom Replacement (4)	A		-	-	-	-	-	-	-	-	1.346	-	-	0.312	-	-	-	-	-	0.312
3.5) Ship Control System (SCS) Modernization (5)	A		-	-	-	-	-	0.266	-	-	1.255	-	-	2.080	-	-	-	-	-	2.080
3.6) Pilot House Redesign (6)	A		-	-	-	-	-	-	-	-	1.291	-	-	1.524	-	-	-	-	-	1.524
Subtotal: 3) Ship Electrical Improvements			**-**	**-**	***29.115***	**-**	**-**	***1.401***	**-**	**-**	***4.481***	**-**	**-**	***10.178***	**-**	**-**	**-**	**-**	**-**	***10.178***
Total			**-**	**-**	**40.194**	**-**	**-**	**1.401**	**-**	**-**	**4.481**	**-**	**-**	**10.178**	**-**	**-**	**-**	**-**	**-**	**10.178**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) Engineering services costs prior to first install are due to non-recurring engineering costs, which include first article development and quality testing along with engineering setup to support development and Risk Management Framework. Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic documentation development, and long lead time material (LLTM) procurements. Installation costs across the FYDP vary depending on current port rates. Port rates are updated every year by the Commander, Navy Regional Maintenance Center (CNRMC) based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. Requires significant upfront cost for non-reoccurring engineering services because

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program	**Aggregated Items Title:** LCC 19/20 Extended Service Life Program

of the significant amount of control the system provides throughout the ship and first article testing, environmental quality testing, software development and system engineering milestone review, Cyber Security hardening under the Risk Management Framework. Engineering services are higher due to labor requirements for system assembly prior to installation.

(2) Procurement of Integrated Voice Network Material for FY25 DSRA. Engineering services costs prior to first install, Non-reoccupying engineering cost, first article environmental quality testing, and engineering lab setup to support software development and Risk Management Framework Certification.

(3) Procurement (1) Kit of General Announcing System Speakers, Amplifiers, and Receivers Install (1) Kit of General Announcing System Speakers, Amplifiers, and Receivers. Engineering services costs prior to first install are due to non-recurring engineering costs, which include first article development and quality testing along with engineering setup to support development and Risk Management Framework.

(4) Procurement (1) Kit of 21/24 MC Intercom System Speakers, Amplifiers, Receivers, and associated Hardware. Install (1) Kit of 21/24 MC Intercom System Speakers, Amplifiers, Receivers, and associated Hardware. Engineering services costs prior to first install are due to non-recurring engineering costs, which include first article development and quality testing along with engineering setup to support development and Risk Management Framework.

(5) Procurement (1) Kit of Analog Ship Control display and repeater equipment. Install (1) Kit of Analog Ship Control display and repeater equipment. Engineering services costs prior to first install are due to non-reoccuring engineering costs, which include first article environmental quality testing and engineering lab setup to support software development and Risk Management Framework certification.

(6) Procurement (1) Kit of Bridge Redesign equipment. Install (1) Kit of Bridge Redesign equipment. Engineering services costs prior to first install are due to non-reoccuring engineering costs, which include first article environmental quality testing and engineering lab setup to support software development and Risk Management Framework certification.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program	**Modification Number / Title:** 1 / LCC 19/20 EXTENDED SERVICE LIFE PROGRAM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	15.547	0.351	0.000	0.351	4.981	0.000	0.000	0.000	0.000	20.879
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	15.547	0.351	0.000	0.351	4.981	0.000	0.000	0.000	0.000	20.879
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**15.547**	**0.351**	**0.000**	**0.351**	**4.981**	**0.000**	**0.000**	**0.000**	**0.000**	**20.879**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[Integrated Bridge Display System (IBDS)] The Integrated Bridge Display System (IBDS) upgrade is a Government-developed replacement for existing digital and analog ship control/navigation information. It consolidates variety of information provided to the pilothouse to common displays in various spaces on U.S. Navy ships. The IBDS also provides opportunities to improve configuration management, logistic supportability, and obsolescence issues endemic to the fleet.

[SS/EDG Genset Upgrade] The Ship Service Generator upgrades replace the #1SS/EDG, #2SS/EDG, and #3SSDG with a 2000KW unit, similar to the existing #3SSDG but shock qualified, and accomplish necessary distribution modifications. This replacement will add an additional 2675KW to the Diesel generating plant and will provide the additional capacity to ensure there is ample power to support full ship's functions/C4I capabilities on a continuous basis. The design will also include the installation of dual redundant voltage regulators.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program	**Modification Number / Title:** 1 / LCC 19/20 EXTENDED SERVICE LIFE PROGRAM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: LCC 19/20 EXTENDED SERVICE LIFE PROGRAM												
A Kits												
Recurring												
1.1.1) Integrated Bridge Display System (IBDS) - NonOrganic (7)	- / -	- / -	1 / 5.237	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.237
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 5.237*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.237*
Non-Recurring												
1.2.1) SS/EDG Genset Upgrade - NonOrganic (8)	- / -	- / -	1 / 9.972	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 9.972
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / 9.972*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 9.972*
Subtotal: LCC 19/20 EXTENDED SERVICE LIFE PROGRAM	*- / -*	*- / -*	*2 / 15.209*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*2 / 15.209*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / 15.209*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 15.209*
Support *(All Modification Items)*												
2.1) Engineering Support-Reoccurring	- / -	- / -	- / 0.228	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.228
Subtotal: Support	*- / 0.000*	*- / -*	*- / 0.228*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.228*
Installation												
Modification Item 1 of 1: LCC 19/20 EXTENDED SERVICE LIFE PROGRAM	- / 0.000	- / 0.000	- / 0.110	- / 0.351	- / 0.000	- / 0.351	- / 4.981	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 5.442
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 0.110*	*- / 0.351*	*- / -*	*- / 0.351*	*- / 4.981*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.442*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**15.547**	**0.351**	**0.000**	**0.351**	**4.981**	**0.000**	**0.000**	**0.000**	**0.000**	**20.879**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program	**Modification Number / Title:** 1 / LCC 19/20 EXTENDED SERVICE LIFE PROGRAM

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: LCC 19/20 EXTENDED SERVICE LIFE PROGRAM

Manufacturer Information

Manufacturer Name: VARIOUS — Manufacturer Location: VARIOUS

Administrative Leadtime *(in Months)*: 0 — Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Apr 2023					
Delivery Dates		Dec 2025					

Manufacturer Name: VARIOUS — Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 — Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Feb 2023					
Delivery Dates		Feb 2025					

Installation Information

Method of Implementation: [none specified]:: Installation Name: Integrated Bridge Display System (IBDS)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.279	0 / 0.000	0 / 0.279	1 / 1.998	- / -	- / -	- / -	0 / 0.000	1 / 2.277
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	0 / 0.279	0 / 0.000	0 / 0.279	1 / 1.998	- / -	- / -	- / -	0 / 0.000	1 / 2.277

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program	**Modification Number / Title:** 1 / LCC 19/20 EXTENDED SERVICE LIFE PROGRAM

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: LCC 19/20 EXTENDED SERVICE LIFE PROGRAM

Installation Information

Method of Implementation: [none specified]:: Installation Name: Integrated Bridge Display System (IBDS)

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1

Method of Implementation: [none specified]:: Installation Name: SS/EDG Genset Upgrade

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.110	0 / 0.072	0 / 0.000	0 / 0.072	1 / 2.983	- / -	- / -	- / -	0 / 0.000	1 / 3.165
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	0 / 0.110	0 / 0.072	0 / 0.000	0 / 0.072	1 / 2.983	- / -	- / -	- / -	0 / 0.000	1 / 3.165

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1

Footnotes:

(7) Procurement (1) Kit of Integrated Bridge equipment. Install (1) Kit of Integrated Bridge equipment. Engineering services costs prior to first install are due to non-reoccuring engineering costs, which include first article environmental quality testing and engineering lab setup to support software development and Risk Management Framework certification. Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program	**Modification Number / Title:** 1 / LCC 19/20 EXTENDED SERVICE LIFE PROGRAM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

installation drawing (SID) development, logistic documentation development and long lead time material (LLTM) procurements. Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

(8) Procurement (1) Set of 3 Ship Service Generators $3,324,141 each totaling $9,972,425 (FY 2023) Install (1) Set of 3 Generators cost $2,983,000 (FY 2025) Engineering services costs prior to first install are due to non-recurring engineering costs, which include first article development and quality testing along with engineering setup to support development and Risk Management Framework. Installation funding for a ship is divided over a three-year period. Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic documentation development and long lead time material (LLTM) procurements. Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	487.604	15.659	11.607	23.272	0.000	23.272	22.968	26.178	29.281	28.902	427.660	1,073.131
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	487.604	15.659	11.607	23.272	0.000	23.272	22.968	26.178	29.281	28.902	427.660	1,073.131
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**487.604**	**15.659**	**11.607**	**23.272**	**0.000**	**23.272**	**22.968**	**26.178**	**29.281**	**28.902**	**427.660**	**1,073.131**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

POLLUTION CONTROL SYSTEMS/EQUIPMENT: This item provides funds for the procurement of pollution control systems and equipment that are required by Navy ships in order for them to comply with international regulations, federal laws, DOD Directives and Navy environmental protection regulations. These regulations, laws and directives restrict the discharge of oily waste, sewage, solid waste, plastic waste, medical waste and hazardous waste. Most of these applicable regulations require Navy ships to comply by fixed deadlines. Failure to comply carries potential personal, civil, and criminal liability, and significantly imposes constraints on the operational capabilities of Navy ships. In some instances, the compliance schedule has required an acceleration of the normal schedules in the procurement process.

SHORE BASED POLLUTION EQUIPMENT - (Logistics)
The shore-based funds provide for equipment required to clean up Navy oil spills in the near shore to open sea environment and in areas distant from fixed bases as required by the Federal Water Pollution Control Act - Public Law 92-500, 33CFR154-155. The law created a National Oil and Hazardous Substance Pollution Contingency Plan and designates the Department of Defense as one of the primary agencies responsible for promotion of effective operation of the plan. The Supervisor of Salvage is assigned the responsibility to provide technical expertise, resources, and equipment for response to Navy-originated spills of oil and other hazardous material in remote areas, coastal waters and/or the open sea. Major items of procurement include the following:

[P40A / HF060 HOT TAP TRAINING SYSTEMS]: These systems are designed to train Fleet divers on the tools and techniques for penetrating into vessel oil tanks below the waterline. The hot tap training kit is a system that contains a cutting device, an underwater hydraulic drill to drive the cutting mechanism and all necessary flanges, fasteners, valves, pumps and ancillaries to use when tapping through shell plating into laden tanks to remove the contents. This training is required as a part of pre-deployment salvage preparations for Mobile Diving and Salvage Unit (MDSU) Companies to train for lightering or removal of oil from a vessel in distress. Inventory objective is 33.

[P40A / HF067 VESSEL SKIMMER SYSTEMS]: These systems are self-propelled skimmers designed for near-shore and low sea-state open ocean environments and are used in conjunction with oil containment boom for mechanical recovery of oil on the water. They are designed to be rapidly transportable to the scene of an oil spill.

[P40A / HF068 UNDERWATER OIL RECOVERY SYSTEM]: A rapidly deployable system that provides grinders, sampling tools, sensors, cutters, connections, pumps, hoses, and hydraulic tools to locate, sample, penetrate, and offload tanks below the water.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / HF069 42" BOOM REPLACEMENT SECTIONS]: Ocean Booming Systems (2000FT each) and Marco self-propelled skimming systems (600FT each) use standardized high buoyancy, high flexibility NAVY 42HB inflatable boom purchased in 55 foot sections to provide phased replacement of rubber boom damaged or worn beyond economical repair. The other components of these systems has a longer useful life and need replacement at much longer intervals.

[P40A / HF070 BOAT VESSEL OF OPPORTUNITY (MINI VOSS)]: Containerized smaller skimming system that can be deployed rapidly and operated from a smaller Vessel of Opportunity.

[P40A / HF071 REPLACE TRANSFER BLADDERS]: Towable transfer 20,000 gallon bladder system rubber bladder replacement. This system provides transfer of recovered product from both near and offshore skimming systems. Hard piping, towing and pump components are reused but the rubber bladder itself requires phased replacement.

[P40A / HF072 BLADDER SYSTEM NOSE MODS]: Towable transfer 20,000 gallon bladder system requires replacement to nose hard piping and hose connection to improve handling at speeds above 3 knots and to accommodate 4-inch hose from skimmer design improvements.

[P40A / HF073 (VOSS) FLOTATION BLADDER REPLACEMENT]: VESSEL OF OPPORTUNITY (VOSS) offshore skimming system replacement inflatable flotation chambers. System provides Navy's only offshore skimming capability. Inflatable flotation chamber phased replacement is necessary to ensure operational capability.

[P40A / HF075 MARCO SKIMMER SYSTEMS LIGHT OIL MODIFICATIONS]: Primary near shore skimming system has inefficient light oil belt system. This procures and incorporates newer technology in disc skimmers, which have vastly improved efficiency in light oils.

[P40A / HF076 VESSEL OF OPPORTUNITY (VOSS) SOFT COMPONENTS REPLACEMENT]: VOSS offshore skimming system soft rubber and fabric components are reaching the end of their service life. These are the Navy's only offshore systems. The hard components (reels, vans, tooling etc.) will be retained and reused.

[P40A / HF077 RUBBER BOAT REPLACEMENT]: Various spill response systems for ship salvage in harbor and near shore environments contain rubber boats to place and maintain skimmers, boom and anchors. These boats and motors are reaching the end of service life and require replacement.

[P40A / HF078 SALVAGE SKIMMER SYSTEMS SERVICE LIFE EXTENSION]: These systems are a collection of small, special-purpose skimmers, containment boom, transfer pumps, storage tanks, sorbents, and ancillary equipment intended as a stand-alone response package for small, salvage-related spills inside and adjacent to ships. This replaces worn out and obsolete components.

[P40A / HF079 ARTIC OIL/HEAVY DEBRIS RECOVERY SYSTEM SERVICE LIFE EXTENSION]: This system is designed to recover oil in an arctic and/or heavy debris environment where specific weather conditions render normal skimmer recovery methods useless. This replaces worn out and obsolete components.

[P40A / HF080 SUPPORT SYSTEMS SERVICE LIFE EXTENSION]: These systems include those auxiliary systems required to keep the oil spill responders operating in the field. These systems include equipment required for command and control, communication, supply, personnel transfer craft, global positioning system (GPS) asset tracking, repair, towing, supply, offloading, deployment, firefighting, demobilization, and other ancillary requirements of a spill response. This replaces worn out and obsolete components.

[P40A / HF081 COMMUNICATION SYSTEMS]: Provide Command Vans, Trailers and Portable Command Centers with improved communications and web access essential for coordination of dispersed operations.

[P40A / HF082 VISCOUS OIL PUMPING SYSTEM IMPROVEMENT]: These provide specialized pumps and water injection to pump very viscous fluids. Large pumps to move large quantities of oil to lighter a stricken ship. Also, oil that weathers, emulsifies, or mixes with other contaminants will become thick and viscous to the point that regular centrifugal pumping systems will not move the oil. This upgrades capabilities of existing systems.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / HF083 VESSEL OF OPPORTUNITY (VOSS) SYSTEM SHIP ADAPTORS]: Adaptors provides specialized attachments to allow the use of the Navy's Vessel of Opportunity (VOSS) Skimming systems on more ship classes.

[P40A / HF084 - HYDRAULIC SUBMERSIBLE PUMPS]: Hydraulic submersible pumps for lightering oil or dewatering. These cylindrically shaped pumps are capable of fitting down a butter worth fitting to remove oil from tanks on damaged or grounded ships.

[P40A / HF085 - FIREFIGHTING (FF) SYSTEM CONTAINERS]: Multi-door shipping containers configured to hold, ship, and quickly deploy existing off-ship firefighting systems (FF).

[P40A / HF086 - FLEET EXERCISE HOT TAP TRAINING KITS]: The hot tap training kit provides a complete kit for training, including communications, test plates, hull mock-ups, fasteners, rigging, and multiple cutting systems, flange systems, and pumping systems.

[P40A / HF087 - LIGHT OIL RECOVERY CLASS 5 SKIMMER INSERTS]: Disk skimmer inserts and ancillary support and installation equipment for upgrading modular and standard skimmer systems. Includes, skimmer, disks, hoses, flanges, valves, handling hardware, and safety hardware.

[P40A / HF088 - VESSEL OF OPPORTUNITY (VOSS) REPLACEMENT FRAMES]: Vessel of Opportunity (VOSS) current buster type skimming system frames and structural elements.

[P40A / HF089 - VESSEL OF OPPORTUNITY (VOSS) REPLACEMENT BLADDERS]: Vessel of Opportunity (VOSS) current buster type skimming system floatation bladders.

[P40A / HF090 - VESSEL OF OPPORTUNITY (VOSS) REPLACEMENT COMPONENTS]: Vessel of Opportunity (VOSS) current buster type skimming system smaller equipment components including nets, straps, envelope ("skin"), rings and latch points, rigging and handling gear

[P40A / HF091 - VESSEL OF OPPORTUNITY (VOSS) SHIP ADAPTER MOUNTING KITS]: VESSEL OF OPPORTUNITY (VOSS) ship adapter mounting kits

[P40A / HF092 - VAN REFURBISHMENT]: For the new purchase or refurbishment of shipping containers to be used as equipment system vans. Includes vans, transportation, flooring, rollers, electrical components, doors, structural elements, gaskets, paint, engineering, and design.

[P40A / HF093 - LOGISTICS SUPPORT EQUIPMENT]: Logistics Support Equipment to include weight handling support systems (forks, rigging, extensions, stabilizers, etc).

[P40A / HF094 - SKIMMER SUPPORT EQUIPMENT]: Skimmer Support Equipment to include equipment boxes and containers, engineering, and materials for the procurement, integration, and maintenance of skimmer support systems, including boat racks, rollers, handling equipment, pumps, hoses, valves, piping, hydraulics, and electrical controls.

[P40A / HF095 - FIELD LIGHTING]: Field lighting equipment to include tower structures, stands, electrical wiring and controls, bulbs, reflectors, shields, switches, boxes, skids, carts, rigging, and tools.

[P40A / HF830 PRODUCTION ENGINEERING]: HF830 PRODUCTION ENGINEERING: Air conditioning plant kit and software quality control, technical manual and complete conversion instruction revisions, technical reports based on investigative efforts of OEM quality assurance or obsolescence issues, and support equipment removal from inactive ships or other Navy assets. Development of technical manuals, Planned Maintenance System (PMS), Provisioning Technical Documentation (PTD), Program Support Data (PSD) and allowance Parts List (APLs), engineering to manage procurement and material, and in support of design reviews.

[P3A / HF024 CFC-114 (R-114) AC CONVERSION]: HF024 - CFC CONVERSION PROGRAM The production of chlorofluorocarbon(CFC)-based refrigerants (including CFC-12 and CFC R-114) was prohibited after 31 DEC 95 by the Clean Air Act of 1990. Presidential Executive Order 13693 calls for federal agencies to " promote sustainable acquisition and procurement by ensuring that each of the following environmental performance and sustainability factors are included ... alternatives to ozone-depleting substances". The Navy is currently dependent on CFC-based refrigerants for the mission-critical cooling of (1) vital electronics and weapon systems, (2) food and medical stowage, and (3) inhabited spaces aboard surface ships and submarines. To counter the immediate threat of production cessation on uninterrupted

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Fleet operations, DoD directed the Defense Logistics Agency to establish a stockpile of CFC-based refrigerants. The stockpile was sized to support Fleet operations until the last CFC-based systems are retired or converted to ozone-friendly refrigerants. This program procures and installs conversion kits on existing CFC R-114 Air-Conditioning (A/C) plants onboard surface ships. The inventory objective for CFC R-114 is 402 converted units.

[P3A - 2 / HF031 OPA IMPROVEMENTS]: Oil Pollution Abatement (OPA) Systems Improvements: Existing OPA systems have demonstrated poor operational availability, maintainability, and reliability. This comprehensive effort addresses the entire OPA system, from holding tanks to overboard discharge, leveraging recommended improvements new to the Fleet and approved, partially completed alterations. The alterations needed to correct design deficiencies are ship specific and require ship checks to confirm the current configuration as prior alterations may have completed one or several of the recommended improvements. The alterations may include, but are not limited to: installation of new tank level sensors; upgrades to the Oily Water Separator (OWS) and the Oil Content Monitor (OCM), correction of OWS suction problems, correction of OCM inlet & outlet piping including related of flush water piping configuration problems, and upgrade of oily waste transfer pump relief valve. Extensive work will occur with LHD-1 Class upgrades to convert the existing OWS to the VS-50 OWS and DDG-51 through DDG-88 ships will receive the Oily Waste Membrane System to produce an effluent that meets the 15 ppm maximum oil discharge requirement.

[P3A - 3 / HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS]: Dry Waste Processing Suite Improvements: The Fleet's challenged to keep solid waste equipment operating and sanitary while maintaining compliance with the Act to Prevent Pollution from Ships (APPS). The root cause of this is: 1) workload; 2) reliability; 3) the maintainability (parts availability); and 4) obsolescence. The improvement and application of current and new processing tools will ensure the safe and efficient management of these materials. The goal is to decrease labor-hours by improving operation and maintenance, increase system availability and address all current and projected obsolescence issues and reducing parts failures by redesign. Impacted equipment includes Compress Melt Units (CMUs), pulpers, shredders, incinerators, and compactors.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	Pollution Control Equipment	P-5a			- / 26.762	- / 1.844	- / 2.242	- / 2.254	- / -	- / 2.254
P-3a	1 / HF024 CFC-114 (R-114) AC CONVERSION (AIT)				- / 369.339	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / HF031 OPA IMPROVEMENTS (AIT)				- / 88.570	- / 13.445	- / 8.131	- / 17.344	- / 0.000	- / 17.344
P-3a	3 / HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS (AIT)				- / 2.933	- / 0.370	- / 1.234	- / 3.674	- / 0.000	- / 3.674
P-40	**Total Gross/Weapon System Cost**				**- / 487.604**	**- / 15.659**	**- / 11.607**	**- / 23.272**	**- / 0.000**	**- / 23.272**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	Pollution Control Equipment	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / HF024 CFC-114 (R-114) AC CONVERSION (AIT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 369.339
P-3a	2 / HF031 OPA IMPROVEMENTS (AIT)				- / 15.137	- / 7.673	- / 11.486	- / 9.195	- / 213.614	- / 384.595
P-3a	3 / HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS (AIT)				- / 5.599	- / 16.220	- / 15.468	- / 17.338	- / 214.046	- / 276.882
P-40	**Total Gross/Weapon System Cost**				**- / 22.968**	**- / 26.178**	**- / 29.281**	**- / 28.902**	**- / 427.660**	**- / 1,073.131**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Increase in funding from FY23 to FY24 is due to beginning of the Dry Waste Suite Improvement program for Surface and Expeditionary Warfare Ships which replaces plastic and cardboard shredders as well as Compress Melt Units (CMU). FY24 also includes upgrades to CVN 68 Class incinerators to reduce fire risk.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0935 / Pollution Control Equipment	Aggregated Items Title: Pollution Control Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) LOGISTICS																				
1.1) HF060 HOT TAP TRAINING SYSTEMS(†)	A		23,000.00	5	0.115	24,408.00	4	0.098	25,876.00	5	0.129	-	-	-	-	-	-	-	-	-
1.2) HF067 VESSEL SKIMMER SYSTEMS(†)	A		150,000.00	13	1.950	147,000.00	2	0.294	149,722.00	3	0.449	155,716.00	1	0.156	-	-	-	155,716.00	1	0.156
1.3) HF068 UNDERWATER OIL RECOVERY SYSTEM(†)	A		304,000.00	2	0.608	312,499.00	1	0.312	-	-	-	325,820.00	1	0.326	-	-	-	325,820.00	1	0.326
1.4) HF069 42" BOOM REPLACEMENT SECTIONS(†)	A		12,097.56	41	0.496	11,850.00	20	0.237	11,847.00	47	0.557	12,084.00	22	0.266	-	-	-	12,084.00	22	0.266
1.5) HF070 BOAT VESSEL OF OPPORTUNITY (MINI VOSS)(†)	A		-	-	-	-	-	-	-	-	-	50,000.00	1	0.050	-	-	-	50,000.00	1	0.050
1.6) HF071 REPLACE TRANSFER BLADDERS(†)	A		200,000.00	1	0.200	204,000.00	1	0.204	214,002.00	1	0.214	216,024.00	2	0.432	-	-	-	216,024.00	2	0.432
1.7) HF072 BLADDER SYSTEM NOSE MODS(†)	A		-	-	-	4,589.00	17	0.078	-	-	-	4,901.00	5	0.025	-	-	-	4,901.00	5	0.025
1.8) HF073 (VOSS) FLOTATION BLADDER REPLACEMENT(†)	A		73,000.00	1	0.073	74,460.00	2	0.149	75,001.00	2	0.150	-	-	-	-	-	-	-	-	-
1.9) HF075 MARCO SKIMMER SYSTEMS LIGHT OIL MODIFICATIONS(†)	A		142,000.00	1	0.142	144,800.00	1	0.145	142,000.00	1	0.142	-	-	-	-	-	-	-	-	-
1.10) HF076 VESSEL OF OPPORTUNITY (VOSS) SOFT COMPONENTS REPLACEMENT(†)	A		-	-	-	-	-	-	251,271.00	1	0.251	-	-	-	-	-	-	-	-	-
1.11) HF077 RUBBER BOAT REPLACEMENT(†)	A		15,000.00	5	0.075	-	-	-	15,600.00	3	0.047	15,500.00	4	0.062	-	-	-	15,500.00	4	0.062
1.14) HF080 SUPPORT SYSTEMS SERVICE LIFE EXTENSION(†)	A		56,000.00	1	0.056	56,899.00	1	0.057	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Aggregated Items Title:** Pollution Control Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.15) HF081 COMMUNICATION SYSTEMS(†)	A		20,000.00	2	0.040	20,400.00	2	0.041	20,800.00	2	0.042	-	-	-	-	-	-	-	-	-
1.17) HF083 VESSEL OF OPPORTUNITY (VOSS) SYSTEM SHIP ADAPTORS(†)	A		27,000.00	3	0.081	27,176.00	3	0.082	27,000.00	5	0.135	-	-	-	-	-	-	-	-	-
1.18) HF084 - HYDRAULIC SUBMERSIBLE PUMPS(†)	A		-	-	-	62,240.00	1	0.062	62,985.00	2	0.126	64,244.00	1	0.064	-	-	-	64,244.00	1	0.064
1.19) HF085 - FIREFIGHTING (FF) SYSTEM CONTAINERS(†)	A		-	-	-	85,000.00	1	0.085	-	-	-	-	-	-	-	-	-	-	-	-
1.20) HF086 - FLEET EXERCISE HOT TAP TRAINING KITS(†)	A		-	-	-	-	-	-	-	-	-	37,168.00	2	0.074	-	-	-	37,168.00	2	0.074
1.21) HF087 - LIGHT OIL RECOVERY CLASS 5 SKIMMER INSERTS(†)	A		-	-	-	-	-	-	-	-	-	188,300.00	1	0.188	-	-	-	188,300.00	1	0.188
1.22) HF088 - VESSEL OF OPPORTUNITY (VOSS) REPLACEMENT FRAMES(†)	A		-	-	-	-	-	-	-	-	-	42,000.00	2	0.084	-	-	-	42,000.00	2	0.084
1.23) HF089 - VESSEL OF OPPORTUNITY (VOSS) REPLACEMENT BLADDERS(†)	A		-	-	-	-	-	-	-	-	-	3,300.00	27	0.089	-	-	-	3,300.00	27	0.089
1.24) HF090 - VESSEL OF OPPORTUNITY (VOSS) REPLACEMENT COMPONENTS(†)	A		-	-	-	-	-	-	-	-	-	24,000.00	4	0.096	-	-	-	24,000.00	4	0.096
1.25) HF091 - VESSEL OF OPPORTUNITY (VOSS) SHIP ADAPTER MOUNTING KITS(†)	A		-	-	-	-	-	-	-	-	-	81,000.00	2	0.162	-	-	-	81,000.00	2	0.162

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Aggregated Items Title:** Pollution Control Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.26) HF092 - VAN REFURBISHMENT(†)	A		-	-	-	-	-	-	-	-	-	42,000.00	3	0.126	-	-	-	42,000.00	3	0.126
1.28) HF094 - SKIMMER SUPPORT EQUIPMENT(†)	A		-	-	-	-	-	-	-	-	-	18,000.00	1	0.018	-	-	-	18,000.00	1	0.018
1.29) HF095 - FIELD LIGHTING(†)	A		-	-	-	-	-	-	-	-	-	17,992.00	2	0.036	-	-	-	17,992.00	2	0.036
Subtotal: 1) LOGISTICS			**-**	**-**	***3.836***	**-**	**-**	***1.844***	**-**	**-**	***2.242***	**-**	**-**	***2.254***	**-**	**-**	**-**	**-**	**-**	***2.254***
2) EXPEDITIONARY WARFARE																				
2.1) HF830 PRODUCTION ENGINEERING	A		-	-	3.896	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) EXPEDITIONARY WARFARE			**-**	**-**	***3.896***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) SURFACE WARFARE																				
3.1) HF830 PRODUCTION ENGINEERING	A		-	-	9.018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) SURFACE WARFARE			**-**	**-**	***9.018***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) AIR WARFARE																				
4.1) HF031 POLLUTION CONTROL EQUIPMENT FIELD CHANGES	A		-	-	10.012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) AIR WARFARE			**-**	**-**	***10.012***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**26.762**	**-**	**-**	**1.844**	**-**	**-**	**2.242**	**-**	**-**	**2.254**	**-**	**-**	**-**	**-**	**-**	**2.254**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0935 / Pollution Control Equipment	Aggregated Items: Pollution Control Equipment

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) LOGISTICS												
1.1) HF060 HOT TAP TRAINING SYSTEMS		2022	GPC / VA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	4	24,408.00	Y		
1.1) HF060 HOT TAP TRAINING SYSTEMS		2023	GPC / VA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	5	25,876.00	Y		
1.2) HF067 VESSEL SKIMMER SYSTEMS		2022	GPC / IRVINE, CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	2	147,000.00	Y		
1.2) HF067 VESSEL SKIMMER SYSTEMS		2023	GPC / IRVINE, CA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	3	149,722.00	Y		
1.2) HF067 VESSEL SKIMMER SYSTEMS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	1	155,716.00	Y		
1.3) HF068 UNDERWATER OIL RECOVERY SYSTEM		2022	GPC / IRVINE, CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	1	312,499.00	Y		
1.3) HF068 UNDERWATER OIL RECOVERY SYSTEM		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	1	325,820.00	Y		
1.4) HF069 42" BOOM REPLACEMENT SECTIONS		2022	GPC / IRVINE, CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	20	11,850.00	Y		
1.4) HF069 42" BOOM REPLACEMENT SECTIONS		2023	GPC / IRVINE, CA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	47	11,847.00	Y		
1.4) HF069 42" BOOM REPLACEMENT SECTIONS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	22	12,084.00	Y		
1.5) HF070 BOAT VESSEL OF OPPORTUNITY (MINI VOSS)		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	1	50,000.00	Y		
1.6) HF071 REPLACE TRANSFER BLADDERS		2022	GPC / IRVINE, CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	1	204,000.00	Y		
1.6) HF071 REPLACE TRANSFER BLADDERS		2023	GPC / IRVINE, CA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	1	214,002.00	Y		
1.6) HF071 REPLACE TRANSFER BLADDERS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	2	216,024.00	Y		
1.7) HF072 BLADDER SYSTEM NOSE MODS		2022	GLOBAL PCCI / IRVINE CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	17	4,589.00	Y		
1.7) HF072 BLADDER SYSTEM NOSE MODS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	5	4,901.00	Y		
1.8) HF073 (VOSS) FLOTATION BLADDER REPLACEMENT		2022	GPC / IRVINE, CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	2	74,460.00	Y		
1.8) HF073 (VOSS) FLOTATION BLADDER REPLACEMENT		2023	GPC / IRVINE, CA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	2	75,001.00	Y		
1.9) HF075 MARCO SKIMMER SYSTEMS LIGHT OIL MODIFICATIONS		2022	GPC / IRVINE, CA	C / CPFF	WASHINGTON, DC	Oct 2021	Oct 2022	1	144,800.00	Y		

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0935 / Pollution Control Equipment	Aggregated Items: Pollution Control Equipment

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.9) HF075 MARCO SKIMMER SYSTEMS LIGHT OIL MODIFICATIONS		2023	GPC / IRVINE, CA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	1	142,000.00	Y		
1.10) HF076 VESSEL OF OPPORTUNITY (VOSS) SOFT COMPONENTS REPLACEMENT		2023	GPC / IRVINE, CA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	1	251,271.00	Y		
1.11) HF077 RUBBER BOAT REPLACEMENT		2023	GPC / VA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	3	15,600.00	Y		
1.11) HF077 RUBBER BOAT REPLACEMENT		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	4	15,500.00	Y		
1.14) HF080 SUPPORT SYSTEMS SERVICE LIFE EXTENSION		2022	GLOBAL PCCI/IRVIN / CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	1	56,899.00	Y		
1.15) HF081 COMMUNICATION SYSTEMS		2022	GLOBAL PCCI / IRVINE CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	2	20,400.00	Y		
1.15) HF081 COMMUNICATION SYSTEMS		2023	GLOBAL PCCI / IRVINE CA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	2	20,800.00	Y		
1.17) HF083 VESSEL OF OPPORTUNITY (VOSS) SYSTEM SHIP ADAPTORS		2022	GPC / IRVINE, CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	3	27,176.00	Y		
1.17) HF083 VESSEL OF OPPORTUNITY (VOSS) SYSTEM SHIP ADAPTORS		2023	GPC / IRVINE, CA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	5	27,000.00	Y		
1.18) HF084 - HYDRAULIC SUBMERSIBLE PUMPS		2022	GLOBAL PCCI / IRVINE CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	1	62,240.00	Y		
1.18) HF084 - HYDRAULIC SUBMERSIBLE PUMPS		2023	GLOBAL PCCI / IRVINE CA	TBD	WASHINGTON, DC	Apr 2023	Apr 2024	2	62,985.00	Y		
1.18) HF084 - HYDRAULIC SUBMERSIBLE PUMPS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	1	64,244.00	Y		
1.19) HF085 - FIREFIGHTING (FF) SYSTEM CONTAINERS		2022	GLOBAL PCCI / IRVINE CA	C / CPFF	WASHINGTON, DC	Jun 2022	Jun 2023	1	85,000.00	Y		
1.20) HF086 - FLEET EXERCISE HOT TAP TRAINING KITS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	2	37,168.00	Y		
1.21) HF087 - LIGHT OIL RECOVERY CLASS 5 SKIMMER INSERTS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	1	188,300.00	Y		
1.22) HF088 - VESSEL OF OPPORTUNITY (VOSS) REPLACEMENT FRAMES		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	2	42,000.00	Y		
1.23) HF089 - VESSEL OF OPPORTUNITY (VOSS) REPLACEMENT BLADDERS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	27	3,300.00	Y		

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Aggregated Items:** Pollution Control Equipment

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty *(Each)*	Unit Cost *($)*	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.24) HF090 - VESSEL OF OPPORTUNITY (VOSS) REPLACEMENT COMPONENTS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	4	24,000.00	Y		
1.25) HF091 - VESSEL OF OPPORTUNITY (VOSS) SHIP ADAPTER MOUNTING KITS		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	2	81,000.00	Y		
1.26) HF092 - VAN REFURBISHMENT		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	3	42,000.00	Y		
1.28) HF094 - SKIMMER SUPPORT EQUIPMENT		2024	TBD / TBD	C / TBD	WASHINGTON, DC	Oct 2023	Oct 2024	1	18,000.00	Y		
1.29) HF095 - FIELD LIGHTING		2024	TBD / TBD	TBD	WASHINGTON, DC	Oct 2023	Oct 2024	2	17,992.00	Y		

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 1 / HF024 CFC-114 (R-114) AC CONVERSION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	369.339	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	369.339
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	369.339	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	369.339
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**369.339**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**369.339**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Navy is currently dependent on CFC-based refrigerants for the mission-critical cooling of (1) vital electronics and weapon systems, (2) food and medical stowage, and (3) inhabited spaces aboard surface ships and submarines. To counter the immediate threat of production cessation on uninterrupted Fleet operations, DoD directed the Defense Logistics Agency to establish a stockpile of CFC-based refrigerants. The stockpile was sized to support Fleet operations until the last CFC-based systems are retired or converted to ozone-friendly refrigerants. This program procures and installs conversion kits on existing CFC R-114 Air-Conditioning (A/C) plants onboard surface ships. The inventory objective for CFC R-114 is 402 converted units.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 1 / HF024 CFC-114 (R-114) AC CONVERSION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CFC R-114 Air-Conditioning (A/C) plants	**Modification Type:** AIT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: HF024 CFC-114 (R-114) AC CONVERSION												
B Kits												
Recurring												
1.1.1) HF024 CFC-114 (R-114) AC CONVERSION - NonOrganic	402 / 166.253	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	402 / 166.253
Subtotal: Recurring	*- / 166.253*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 166.253*
Subtotal: HF024 CFC-114 (R-114) AC CONVERSION	*402 / 166.253*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*402 / 166.253*
Subtotal: Procurement, All Modification Items	*- / 166.253*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 166.253*
Installation												
Modification Item 1 of 1: HF024 CFC-114 (R-114) AC CONVERSION	- / 203.086	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 203.086
Subtotal: Installation	*- / 203.086*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 203.086*
Total												
Total Cost (Procurement + Support + Installation)	**369.339**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**369.339**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 1 / HF024 CFC-114 (R-114) AC CONVERSION

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: HF024 CFC-114 (R-114) AC CONVERSION

Manufacturer Information

Manufacturer Name: YORK INTERNATIONAL | Manufacturer Location: PA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: HF024 CFC-114 (R-114) AC CONVERSION

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	398 / 203.086	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	398 / 203.086
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	398 / 203.086	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	398 / 203.086

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	402
Out	398	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	402

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 2 / HF031 OPA IMPROVEMENTS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	88.570	13.445	8.131	17.344	0.000	17.344	15.137	7.673	11.486	9.195	213.614	384.595
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	88.570	13.445	8.131	17.344	0.000	17.344	15.137	7.673	11.486	9.195	213.614	384.595
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**88.570**	**13.445**	**8.131**	**17.344**	**0.000**	**17.344**	**15.137**	**7.673**	**11.486**	**9.195**	**213.614**	**384.595**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

HF031 Expeditionary Warfare: OPA Systems Improvements: These installations resolve issues with existing OPA systems including poor operational availability, maintainability, and reliability. Variations in costs are subject to specific ship needs and are confirmed based upon ship checks. Shipset install/hardware buys may include: VS-50 oily water separators, secondary membrane treatment system, oil content monitor datalogger(s), multiple pumps, valves, valve actuators, sensors, switches, placards, and hoses.

HF031 Surface Warfare: OPA Systems Improvements: These installations resolve issues with existing OPA systems including poor operational availability, maintainability, and reliability. Variations in costs are subject to specific ship needs and are confirmed based upon ship checks. Shipset install/hardware buys may include: oily water transfer systems, secondary membrane treatment system, oil content monitor datalogger(s), multiple pumps, valves, valve actuators, sensors, switches, placards, and hoses.

[HF031 Oil Pollution Abatement (OPA) Improvements] Variations in Unit costs for Oil Pollution Abatement (OPA) Improvements are due to following factors:
- Unit cost variance is due to (1) the scope of the hardware suite for OPA improvements where some ship improvements are complete suite and others are components such as Oil Content Monitors (OCM), and Oil Water Separators (OWS) (2) Installations on both Expeditionary and Surface Warfare (WF) ships, and (3) Location of availability.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 2 / HF031 OPA IMPROVEMENTS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: Oil Pollution Abatement System	**Modification Type:** AIT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: HF031 OPA IMPROVEMENTS												
B Kits												
Recurring												
1.1.1) HF031 Oil Pollution Abatement (OPA) Improvements - NonOrganic (1)	62 / 18.732	13 / 5.049	8 / 3.238	15 / 8.045	- / -	15 / 8.045	7 / 3.800	7 / 3.577	8 / 3.426	4 / 2.600	55 / 36.100	179 / 84.567
Subtotal: Recurring	*- / 18.732*	*- / 5.049*	*- / 3.238*	*- / 8.045*	*- / -*	*- / 8.045*	*- / 3.800*	*- / 3.577*	*- / 3.426*	*- / 2.600*	*- / 36.100*	*- / 84.567*
Subtotal: HF031 OPA IMPROVEMENTS	*62 / 18.732*	*13 / 5.049*	*8 / 3.238*	*15 / 8.045*	*- / -*	*15 / 8.045*	*7 / 3.800*	*7 / 3.577*	*8 / 3.426*	*4 / 2.600*	*55 / 36.100*	*179 / 84.567*
Subtotal: Procurement, All Modification Items	*- / 18.732*	*- / 5.049*	*- / 3.238*	*- / 8.045*	*- / -*	*- / 8.045*	*- / 3.800*	*- / 3.577*	*- / 3.426*	*- / 2.600*	*- / 36.100*	*- / 84.567*
Installation												
Modification Item 1 of 1: HF031 OPA IMPROVEMENTS	- / 69.838	- / 8.396	- / 4.893	- / 9.299	- / 0.000	- / 9.299	- / 11.337	- / 4.096	- / 8.060	- / 6.595	- / 177.514	- / 300.028
Subtotal: Installation	*- / 69.838*	*- / 8.396*	*- / 4.893*	*- / 9.299*	*- / -*	*- / 9.299*	*- / 11.337*	*- / 4.096*	*- / 8.060*	*- / 6.595*	*- / 177.514*	*- / 300.028*
Total												
Total Cost (Procurement + Support + Installation)	**88.570**	**13.445**	**8.131**	**17.344**	**0.000**	**17.344**	**15.137**	**7.673**	**11.486**	**9.195**	**213.614**	**384.595**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 2 / HF031 OPA IMPROVEMENTS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: HF031 OPA IMPROVEMENTS

Manufacturer Information

Manufacturer Name: Various [2]	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Dec 2022	Dec 2023				
Delivery Dates	Dec 2022	Dec 2023	Dec 2024				

Installation Information

Method of Implementation: [none specified]:: Installation Name: HF031 Oil Pollution Abatement (OPA) Improvements

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 69.838	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	62 / 69.838	62 / 139.676
FY 2022	- / -	0 / 8.396	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 8.396	13 / 16.792
FY 2023	- / -	- / -	0 / 4.893	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 4.893	8 / 9.786
FY 2024	- / -	- / -	- / -	0 / 9.299	0 / 0.000	0 / 9.299	- / -	- / -	- / -	- / -	15 / 9.299	15 / 18.598
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 11.337	- / -	- / -	- / -	7 / 11.337	7 / 22.674
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 4.096	- / -	- / -	7 / 4.096	7 / 8.192
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 8.060	- / -	8 / 8.060	8 / 16.120
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 6.595	4 / 6.595	4 / 13.190
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	55 / 55.000	55 / 55.000
Total	0 / 69.838	0 / 8.396	0 / 4.893	0 / 9.299	0 / 0.000	0 / 9.299	0 / 11.337	0 / 4.096	0 / 8.060	0 / 6.595	179 / 177.514	179 / 300.028

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179	179
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179	179

Footnotes:

[1] Installation costs include Design Services Allocations (DSA) and Advanced Planning (AP) efforts which are funded one and half year prior to installation. Increase from FY23 to FY24 due to increase in number of Oil content Monitor (OCM) only installations for Surface Warfare (DDG 1000 Class and LCS Class ships), and expeditionary warfare (LCC 19 Class, and LHD 1 Class) ships. Additionally, in FY24 there is an increase of membrane Oil water Separator (OWS) systems for DDG 51 Class Ships.

[2] HF031 OPA Improvements Manufacturer Identification is a hardware suite and includes various part pieces and equipment procurements from multiple vendors per specific ship requirements.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 3 / HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2.933	0.370	1.234	3.674	0.000	3.674	5.599	16.220	15.468	17.338	214.046	276.882
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2.933	0.370	1.234	3.674	0.000	3.674	5.599	16.220	15.468	17.338	214.046	276.882
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2.933**	**0.370**	**1.234**	**3.674**	**0.000**	**3.674**	**5.599**	**16.220**	**15.468**	**17.338**	**214.046**	**276.882**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Dry Waste Processing Suite Improvements: Expeditionary Warfare: Funding provided to support dry waste handling equipment improvements on LHA, LHD, LPD and LSD platforms including compressed melt units, pulpers, shredders, and compactors.

Dry Waste Processing Suite Improvements: Surface Warfare: Funding provided to support dry waste handling equipment improvements on CG, LCS and DDG platforms including compressed melt units, pulpers, shredders, and compactors.

Dry Waste Processing Suite Improvements: Air Warfare: Funding provided to support dry waste handling equipment improvements on CVN platforms including compressed melt units, pulpers, shredders, incinerators, and compactors.

[Dry Waste Processing Suite Improvements] FY22 and FY23 funding for incinerator replacement to reduce fire risk on Air Warfare (WF) CVN 71 and CVN 70 ships.
Changes in Unit Cost and Quantity due to various combinations of improvements (incinerator or CMUs) on various ship platforms.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 3 / HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: Dry Waste Processing Equipment	**Modification Type:** AIT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS												
B Kits												
Recurring												
1.1.1) Dry Waste Processing Suite Improvements - NonOrganic (3)	3 / 2.933	1 / 0.370	1 / 1.234	5 / 3.674	- / -	5 / 3.674	6 / 5.599	8 / 10.072	10 / 13.104	9 / 13.306	147 / 129.632	190 / 179.924
Subtotal: Recurring	*- / 2.933*	*- / 0.370*	*- / 1.234*	*- / 3.674*	*- / -*	*- / 3.674*	*- / 5.599*	*- / 10.072*	*- / 13.104*	*- / 13.306*	*- / 129.632*	*- / 179.924*
Subtotal: HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS	*3 / 2.933*	*1 / 0.370*	*1 / 1.234*	*5 / 3.674*	*- / -*	*5 / 3.674*	*6 / 5.599*	*8 / 10.072*	*10 / 13.104*	*9 / 13.306*	*147 / 129.632*	*190 / 179.924*
Subtotal: Procurement, All Modification Items	*- / 2.933*	*- / 0.370*	*- / 1.234*	*- / 3.674*	*- / -*	*- / 3.674*	*- / 5.599*	*- / 10.072*	*- / 13.104*	*- / 13.306*	*- / 129.632*	*- / 179.924*
Installation												
Modification Item 1 of 1: HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 6.148	- / 2.364	- / 4.032	- / 84.414	- / 96.958
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.148*	*- / 2.364*	*- / 4.032*	*- / 84.414*	*- / 96.958*
Total												
Total Cost (Procurement + Support + Installation)	**2.933**	**0.370**	**1.234**	**3.674**	**0.000**	**3.674**	**5.599**	**16.220**	**15.468**	**17.338**	**214.046**	**276.882**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 3 / HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS

Manufacturer Information

Manufacturer Name: Various [4] | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Dec 2022	Dec 2023				
Delivery Dates		Dec 2023	Dec 2024				

Installation Information

Method of Implementation: AIT:: Installation Name: Dry Waste Processing Suite Improvements

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.000	3 / 1.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.370	1 / 0.370
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.000	1 / 1.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.000	5 / 1.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.000	6 / 1.000
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 6.148	4 / 0.000	- / -	0 / 0.000	8 / 6.148
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.364	3 / 0.000	0 / 0.000	10 / 2.364
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 4.032	0 / 0.000	9 / 4.032
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	147 / 80.044	147 / 80.044
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 6.148	11 / 2.364	12 / 4.032	163 / 84.414	190 / 96.958

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4	4	2	1	3	6	1	2	163	190
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4	4	2	7	3	3	163	190

Footnotes:

[3] Total quantity and price changed to reflect updated costs of Air Warfare procurements and installations. Hardware funding includes Production Engineering (PE) efforts. Hardware cost variances are due to specific ship requirements, location of installation, and components of Dry Waste Processing Suite Improvements e.g. incinerator replacement, solid waste shredders (plastic/metal/glass), Compress Melt Units (CMUs), and next generation of Plastic Waste Processors (PWP) to be procured and installed.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment	**Modification Number / Title:** 3 / HF031 DRY WASTE PROCESSING SUITE IMPROVEMENTS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(4) HF031 Dry Waste Processing Improvements Manufacturer Identification is a hardware suite and includes various part pieces and equipment procurements from mulitple vendors per specific ship requirements.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	139.983	88.284	116.575	112.526	0.000	112.526	75.149	78.982	87.445	79.308	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	139.983	88.284	116.575	112.526	0.000	112.526	75.149	78.982	87.445	79.308	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**139.983**	**88.284**	**116.575**	**112.526**	**0.000**	**112.526**	**75.149**	**78.982**	**87.445**	**79.308**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line supports modernization and obsolete equipment replacement for SSNs, recapitalization of militarily critical silencing ranges, modifications and upgrades to weapons launch equipment, upgrades & refurbishment of Submarine Special Operating Forces (SOF) equipment and Dry Deck Shelters (DDS), and the VIRGINIA class Acoustic Superiority Backfit program.

Decrease in funding from FY 2023 to FY 2024 reflects completion of Diver Oxygen Treatment System (DOTS) installs on SSN-777 & 778. New efforts fund the installation of a Pacific Fleet Submerged Electro-Magnetic Range starting in FY24.

This line funds procurement and installation of VACL Acoustic Superiority machinery modifications. The second component of the AS program, the LVA sonar, is funded under Line Item 2150.

The SSN Class Component Upgrades sub-line provides for equipment technical refresh and upgrades that consist of hardware, software, system engineering, integrated logistics support, system test and evaluation, training, data, alteration installation teams and program management. The majority of these upgrades address obsolesces issues that result in unsupportable hardware or provide for improved reliability of systems that have proven to have inadequate reliability in service.

The Facilities/Lab Upgrades sub-line procures equipment and material used to implement the military high priority Submarine Silencing Program for operating nuclear submarines. These silencing program equipment technical refreshes and upgrades are not funded by other NAVSEA program offices and support SSN/SSBN/SSGN Class submarines and land based laboratories/facilities.

The Weapons Handling Systems sub-line fund modifications and improvements to SSN 688, SSN 774 and SSN 21 class submarine weapons launching systems, stowage and shipping systems, torpedo tube system components and torpedo tube test equipment. These modifications are required to address reliability, maintainability, functionality and safety modifications and/or tactical improvements resulting from operational use and experience. This funding also provides management services required for installations.

The VA Class SOF sub-line procures and installs unique system components required for SOF operations and support on designated SOF VIRGINIA class submarines . Starting in FY24, this PB009 sub-line includes funding for Dry Deck Shelters Modernization that was previously included under the SSN Class Component Upgrades (PB002) sub-line in FY22 and FY23.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / SSTG Digital Voltage]: SSTG Digital Voltage Regulator upgrade (SHIPALT 4884K) - Upgrades SSN-774 - 779 SSTG voltage regulators. Existing SSTGs on early VIRGINIA Class submarines use analog voltage regulators, which are obsolete and unsustainable. S/A upgrades these ships to the later style Digital Voltage Regulator which is supportable. SSN 780 and later ships were delivered with the new design Digital Voltage Regulator.

[P40A / Integrated Communications System (ICS) Block 5 ShipAlt]: Upgrades Block I/II VIRGINIA class ICS systems to the Block V system (SHIPALT 5061K). The ICS system provides integrated interior communication and alarms functions throughout the submarine. This system is required for safe operation of the ship. The ICS system on these ships is a COTS based system designed in the mid-1990s and first installed in 2002. Much of the design is now obsolete and unsupported. ICS must be operational to meet underway requirements. This alteration addresses obsolescence of key components in the legacy systems by upgrading the entire system to the current generation Block V system.

[P40A / DGIOTS Shock Modification]: Diesel Generator Independent Over Speed Trip System (DGIOTS) Shock Modification (SHIPALT 4778K) - The DGIOTS control panel on VIRGINIA Class Blocks I/II has obsolete components and fails to meet requirements for shock and vibration. SHIPALT 4778K provides a shock/vibration-qualified control panel using current, supportable technology.

[P40A / Fwd Automatic Bus Transfer (ABT) Power Modification]: Modifies block I/II VIRGINIA class forward ABTs to improve system capability to support critical electronic systems during a loss of power. (SHIPALT 4882K).

[P40A / Manual Remote Operator (MRO) Shock Mod]: VIRGINIA class MRO Shock Modification (SHIPALT 4620K) - Accomplishes design changes on 20 MROs per ship to meet shock qualification requirement. Required on SSN 774-781; later ships received the alteration during new construction.

[P40A / Circuit D/Impressed Current Cathodic Protection System (ICCP) OER]: Funds development, procurement and installation of SHIPALT 5062K to upgrade the Circuit D system on block I/II VIRGINIA ships to the current design block V system. The Circuit D system supports degaussing underway and the ICCP system provides protection against hull corrosion. Both are critical systems that are obsolete in Block I/II VIRGINIA class submarines and require modernization to allow continued support. Additionally, both systems require an interface with shipboard navigation data available through the SWFTS system. Future upgrade of the VA Class SWFTS sonar/fire control systems to TI-24/APB-23 or greater involve a change of middleware from CORBA to AMPQ protocols, which requires SHIPALT development and implementation for these two systems to support continued operation with the new SWFTS communication protocol.

[P40A / SSTG Reliability Upgrades]: Funds a variety of SHIPALT efforts to improve VACL SSTG reliability

[P40A / Low Pressure Electrolyzer (LPE) Upgrade]: Procures & installs SHIPALT 5031K on selected SSN-688 class ships to replace legacy Electrolytic Oxygen Generator (EOG) system with a modern Low Pressure Electrolyzer (LPE). A reliable oxygen generation system is critical to support crew health and submarine stealth (inoperable oxygen generators are likely to greatly increase the frequency and time the ship must operate at periscope depth where she is most vulnerable to detection and collision). The LPE produces oxygen at low pressure, eliminating the need for high pressure oxygen storage which greatly improves safety and reliability as well as decreasing maintenance cost. Procurements are driven by the SSN-688 Class maintenance period schedule as replacement of the EOG with the LPE will be done during CNO availability due to the time to complete the installation. Production engineering efforts in this line support the development and qualification of modernization efforts to support long term sustainment of in service LPE systems.

[P40A / Central Air Monitoring System (CAMS) Modernization}: The CAMS system is critical to allow monitoring of atmospheric conditions throughout the submarine while underway, and hence critical to crew health & safety. The existing system suffers from multiple parts that are obsolete. This line funds efforts to develop, qualify and implement modernization solutions that allow long term sustainment of the system.

[P40A / SSN HM&E System Sustainment]: Funds development and implementation of various minor critical alterations to in-service SSN HM&E systems. This funding line differs from the PTROCS line in that is support modernization of hardware items such as lifelines, hatch clips, pumps, etc. whereas PTROCS supports modernization driven by obsolescence of COTS based control systems.

[P40A / VA Class Machinery Control System Modernization]: VIRGINIA class submarines use COTS based systems for control of the main propulsion machinery and turbine generators. Reliable operation of these systems is critical to safe underway operation of the submarine. This line procures and installs a number of alterations to mitigate obsolescence of these control systems

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / Emergency Diesel Generator Reliability Upgrades]: The Emergency Diesel Generator is a critical backup systems required for safe underway operation. SEAWOLF and LOS ANGLES class submarines use a Fairbanks Morse Engineering generator system which remains largely in a 1970's era configuration. This funding line develops and installs modernization solutions to improve reliability and supportability of the engines and related control systems in order to support continued operation throughout the life of the ship.

[P40A / VACL Battery Management System Upgrade]: VIRGINIA Class ships (Blk I-IV) use legacy Automatic Battery Management / Battery Current Management Systems (ABMS/BCMS) to monitor battery health and operating conditions. This monitoring equipment is required to safely operate the battery and thus the submarine. The existing design is 20 years old, and while a tech refresh was conducted in FY20/21, the refreshed systems will be obsolete and unsupportable well prior to the end of service life for these boats. Funding is requested to replace the legacy systems starting with VA class block III boats with the new design Battery Management System (BMS) used on VA class block V.

[P40A / VACL Pressure Hull Castings]: Due to significant vendor issues regarding improper heat treatment of large pressure hull castings on VACL hulls significant work is being done to test and monitor castings in the fleet. This program procures replacements castings for known deficient castings in the fleet.

[P40A / VACL Modified Tailcone]: The modified tailcone mitigates an issue that imposes operational restrictions on VA Class SSNs. This funding line modifies existing tailcones for a more economical price than procuring new tailcones. Installation will be performed during EDSRA/DMP as part of the existing planned work package.

[P40A / SWCL San Pump Upgrade]: This line procures and installs modified OHIO class sanitary pumps for SEAWOLF class ships. Original design SEAWOLF class pumps have proven unsupportable and 2 of the 3 ships in the class do not have operational pumps and instead must blow tanks with air. Blowing places operation restrictions on the ship and causes excessive wear of HPACs along with detrimental fatigue cycles on the hull/tank structure. The use of modified OHIO class pumps saves significant procurement cost and leverages existing support and repair facilities.

[P40A / Periodic Tech Refresh of COTS Systems (PTROCS)]: VA Class SSNs have several COTS based HM&E systems requiring planned modernization to allow continued supportability or operation. Modernization needs are identified based on system health and predictive modeling or for SWFTS connected systems if needed to maintain interface compatibility. PTROCS groups and level loads the design and development lines of these HM&E systems into one PTROCS design and development line to support more responsive ship alteration development of these systems. This line will fund proactive management of these systems, and system previously funded under other lines, such as VACL ICS and VACL machinery control will continue to be funded under these lines. Provides funding to support design and development of modernization efforts for emerging COTS obsolescence issues. Modernization issues are driven by diminishing manufacturing sources and SWFTS technical insertion schedule.

[P40A / Acoustic Range Replacement Equipment]: Procures equipment and materials required to implement and support the military high priority Submarine Silencing Program for operating nuclear submarines. TYCOMs have consistently rated the conduct of noise trials as a high priority funding requirement. The requirements for this program are identified in Chief of Naval Operations (CNO) Specific Operational Requirements 46-28 (assessment of ship's acoustic posture, etc.) and Naval Sea Systems Instruction (NAVSEAINST) C9073.2B (Acoustic Surveys Policy). This is the only program in place to procure equipment for the purpose of measuring, monitoring, assessing and improving the detection capability and reducing the detectability of deployed submarines. The equipment is used on test vessels, listening platforms and at the laboratories. This program replaces or refurbishes broken or obsolete acquisition and analysis hardware and software used to ensure ship's stealth and safety. These refurbishments and replacements are especially critical to sustain the technology and infrastructure supporting the Acoustic Measurement Facilities Improvement Program, to include the South Tongue of the Ocean Acoustic Facility (STAFAC) and South East Alaska Facility (SEAFAC). Specific items include hydrophone arrays, towed arrays, ranging and tracking systems, on-board array electronics, noise sources, shore power cables, data fiber optic cables, data analysis systems, workstations, data storage and retrieval, communications systems, analyzers, tape recorders, accelerometers, monitors, etc.

[P40A /Underwater Electro-Magnetic (UEM) Range Replacement Equipment]: Procures equipment and materials to support the Electro-Magnetic Silencing Program for operating nuclear submarines. The requirements for magnetic silencing and surveillance are identified in Chief of Naval Operations (CNO) Instruction OPNAVINST 8950.2H. Underwater Electromagnetic Measurement System (UEMMS) equipment and supporting Magnetic Silencing Facilities acquire/analyze magnetic and electric field signatures to monitor, assess and reduce the detectability of deployed submarines and surface ships. This program replaces or refurbishes broken or obsolete acquisition and analysis equipment used to monitor ship's UEM signatures. The program ensures UEMMS readiness to support the fleet surveillance required by OPNAVINST 8950.2H and provides the capability to alert the fleet and technical community to degradations in ship systems. Refurbishments and replacements ensure system readiness and provide tech insertions as necessary to support program objectives and obtain/analyze the data necessary to assess the health of the force. Specific items include conductivity-time-depth (CTD) sensors, magnetic / electric field sensors, sensor stanchions/tubes, data acquisition equipment, cabling and ancillary materials, data analysis hardware/software, data storage/ retrieval systems, calibration sources, workstations, communications systems, analyzers, and supporting laboratory equipment.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A /Pacific Fleet Submerged Electro-Magnetic Range]: New effort starting in FY24 fund the Pacific Fleet Submerged Electro-Magnetic Range, a submerged Underwater Electromagnetic (UEM) measurement capability in the PACFLT AOR, located at the Pacific Missile Range Facility (PMRF) in Hawaii. This facility will be similar to the system currently at the South Florida Ocean Measurement Facility (SFOMF) in Fort Lauderdale, FL., and would support VIRGINIA Class and future submarine classes.

[P40A / Weapon Launching Handling System]: The Submarine Torpedo Tube Support category funds in-service support and alteration procurements for all submarine Torpedo Tubes (TT), Torpedo Ejection Pumps (TEP), Internal Countermeasure Launchers (ICL), Weapons Launch Console (WLC) and Weapons Stowage and Handling Systems (WSHS). Development efforts under this item number include Engineering Change Proposals (ECP), ORDALTs, and Test Equipment and alteration material procurement to correct significant deficiencies in equipment affecting personnel safety, ship safety and system performance. Efforts also include modernization required to ensure continue supportability of COTS based systems and comparability with SWTFS system upgrades. Production engineering includes resolving Liaison Action Requests (LARs) configure/test assembly in lab prior to ship installation and in-shop engineering support of vendor testing.

[P40A / Weapon Launch Console (WLC) Tech Refresh]: VIRGINIA block I-IV weapons launch consoles face a variety of obsolescence and supportability issues. Additionally, modernization in block III & IV ships is required to ensure continued operability with future SWFTS upgrades. The weapons launch console interfaces with SWTFS systems, and thus must support correct interface protocols and general requirements such as cybersecurity compliance, but is not modernized as part of SWFTS installs. This funding line supports design, procurement, and installation of required modifications to these systems on block I-IV ships.

[P40A / Weapon Handling Systems - EPCC Tech Refresh]: VIRGINIA block I-IV class submarine weapon handling systems use electromechanical actuators to actuate weapons cradle movement controlled by Electromechanical Power Conditioner and Controllers (EPCCs). These units are no longer produced and unsupportable. This line funds design, procurement and install of new design EPCC systems that are supportable and maximize commonality with VIRGINIA block V submarines.

[P40A / Torpedo Tube OPROD Upgrade]: External torpedo tube components such as the muzzle hatch and hull fairing are actuated with internal actuators that connect to the actuated component via a hull penetrating operating rod (OPROD). OPRODS used on VIRGINIA class submarines have a deficient design that provide an inadequate fatigue life. The OPRODs are an integral part of the tube interlock system that prevents opening of both doors simultaneously, thus failure of the OPROD poses a significant safety hazard, and replacement is required prior to the expected fatigue life, which is currently shorter than the life of the ship. This line procures and installs upgraded oprods that increase fatigue life to exceed the service life of the ship.

[P40A / VA Class SOF Modifications]: Starting in FY22, all funding for FY22-25 SSN SOF support transferred from BLI 0950 to BLI 0941. Provides for procurement of VIRGINIA Class unique system components that will be installed during planned modernization periods. Also provides funding to perform integrated testing of these unique systems to ensure satisfactory operation with other HM&E and Combat Systems. Funds are provided for procurement of Submarine Special Operations Forces (SOF) unique system components that will be installed during planned modernization periods. Funds are also provided for installation of SOF unique system components. All funding for FY21 and prior resides in BLI 0950.

[P40A / Diver Oxygen Treatment System (DOTS)/Lockout Trunk]: Funds installation of Diver Oxygen Treatment System (DOTS) and certification of Lockout Trunk (LOT) on Special Operations Forces (SOF) designated submarines SSN 777 and 778 to support NAVY SOCOM requirements. Supports the planning and procurement of long-lead time materials for installation during scheduled Depot Modernization Periods (DMPs) due to length of time required to install DOTS.

[P40A / Dry Deck Shelter (DDS) Modernization]: The DDS is a certified diving system that attaches to modified host submarines and provides for insertion of SOF forces and platforms. The Department of the Navy has MOA cost share agreements with the United States Special Operations Command (USSOCOM) to support the modernization of DDS units in order to accommodate current and future Naval Special Warfare payloads, as well as large U.S. Navy payloads. Funding continues engineering design, fabrication, assembly, testing, and sparing. Changes include extending the shelter 50 inches, replacing the Track and Cradle assembly with a higher capacity and remotely operated Payload-Launch and Recovery System (P-LARS), incorporation of remote controls for all DDS functions, and relocation of equipment inside the DDS hangar to accommodate Navy and USSOCOM payloads such as SWCS/MK-11 SDV. DDS modernization is currently a 68/32 cost share between SOCOM and the Department of the Navy.

[P40A / DCS-Next Integration into VACL BLK I-III]: Support for in service VA Class SOF capabilities. Starting in FY25, this PB009 sub-line includes funding to modify (2) additional VACL BLK I-III submarines in order to integrate and host Dry Combat Submersible (DCS) Next.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	Submarine Support Equipment				- / 133.283	- / 85.766	- / 107.610	- / 106.923	- / -	- / 106.923
P-3a	1 / PB002 Acoustic Superiority Machinery Alterations (TBD)				- / 6.700	- / 2.518	- / 8.965	- / 5.603	- / 0.000	- / 5.603
P-40	**Total Gross/Weapon System Cost**				**- / 139.983**	**- / 88.284**	**- / 116.575**	**- / 112.526**	**- / 0.000**	**- / 112.526**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	Submarine Support Equipment				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / PB002 Acoustic Superiority Machinery Alterations (TBD)				- / 4.934	- / 5.829	- / 5.674	- / 5.787	- / 23.433	- / 69.443
P-40	**Total Gross/Weapon System Cost**				**- / 75.149**	**- / 78.982**	**- / 87.445**	**- / 79.308**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Decrease in funding from FY 2023 to FY 2024 reflects completion of Diver Oxygen Treatment System (DOTS) installs on SSN-777 & 778. New efforts fund the installation of a Pacific Fleet Submerged Electro-Magnetic Range starting in FY24.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Aggregated Items Title: Submarine Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) PB002/PB5IN SSN Class Component Upgrades																				
1.1) Propulsor Upgrade Procurement	A		-	-	4.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) Propulsor Upgrade Installation	A		-	-	9.909	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) SSTG Digital Voltage Procurement (1)	A		-	-	7.762	-	-	4.245	-	-	4.330	-	-	-	-	-	-	-	-	-
1.4) SSTG Digital Voltage Installation	A		-	-	1.540	-	-	-	-	-	0.552	-	-	0.563	-	-	-	-	-	0.563
1.5) ICS Block 5 ShipAlt Design & Dev.	A		-	-	6.699	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6) ICS Block 5 Design Change Procurement (2)	A		-	-	14.243	-	-	2.706	-	-	2.760	-	-	2.815	-	-	-	-	-	2.815
1.7) ICS Block 5 Design Change Installation	A		-	-	2.122	-	-	4.265	-	-	1.104	-	-	3.526	-	-	-	-	-	3.526
1.8) Bulkhead 6 Tile Maintenance Procurement	A		-	-	0.246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.9) Bulkhead 6 Tile Maint Installation	A		-	-	2.645	-	-	0.698	-	-	-	-	-	-	-	-	-	-	-	-
1.10) DGIOTS Shock Modification Procurement (3)	A		-	-	1.396	-	-	0.487	-	-	0.162	-	-	0.166	-	-	-	-	-	0.166
1.11) DGIOTS Shock Modification Installation	A		-	-	0.930	-	-	0.325	-	-	0.108	-	-	0.110	-	-	-	-	-	0.110
1.12) Fwd Automatic Bus Transfer Pwr Mod Procurement (4)	A		-	-	1.648	-	-	0.849	-	-	0.866	-	-	0.442	-	-	-	-	-	0.442
1.13) Fwd Automatic Bus Transfer Pwr Mod Installation	A		-	-	6.593	-	-	3.396	-	-	3.465	-	-	1.767	-	-	-	-	-	1.767
1.14) MRO Shock Mod Procurement (5)	A		-	-	1.714	-	-	0.446	-	-	0.455	-	-	0.464	-	-	-	-	-	0.464
1.15) MRO Shock Mod Installation	A		-	-	0.340	-	-	0.117	-	-	0.119	-	-	0.121	-	-	-	-	-	0.121
1.16) Circuit D Cathodic Protection Sys OER Design & Dev.	A		-	-	1.887	-	-	2.598	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Aggregated Items Title: Submarine Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.17) Circuit D/Cath Protection Sys OER Procurement (6)	A		-	-	3.672	-	-	1.273	-	-	1.299	-	-	1.325	-	-	-	-	-	1.325
1.18) Circuit D/Cath Protection Sys OER Installation	A		-	-	0.121	-	-	0.062	-	-	0.064	-	-	0.065	-	-	-	-	-	0.065
1.19) SSTG Reliability Upgrades Design & Dev. (7)	A		-	-	0.748	-	-	0.664	-	-	1.711	-	-	1.679	-	-	-	-	-	1.679
1.20) SSTG Reliability Upgrades Procurement	A		-	-	-	-	-	4.400	-	-	-	-	-	4.578	-	-	-	-	-	4.578
1.21) SSTG Reliability Upgrades Installations	A		-	-	-	-	-	-	-	-	2.623	-	-	-	-	-	-	-	-	-
1.22) Portable Ship Control Unit Installation (8)	A		-	-	2.424	-	-	-	-	-	-	-	-	1.325	-	-	-	-	-	1.325
1.23) High Pressure Air Dryer Design Development (9)	A		-	-	0.830	-	-	0.435	-	-	-	-	-	-	-	-	-	-	-	-
1.24) High Pressure Air Dryer Procurement (Fleet Install)	A		-	-	1.050	-	-	0.765	-	-	2.000	-	-	-	-	-	-	-	-	-
1.25) Dry Deck Shelter	A		-	-	-	-	-	4.637	-	-	4.729	-	-	-	-	-	-	-	-	-
1.26) VA Class Acoustic Superiority Prog Design & Dev./ Tech Transfer	A		-	-	15.389	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.27) LPE Material Procurement (10)	A		-	-	-	-	-	1.971	-	-	-	-	-	2.050	-	-	-	-	-	2.050
1.28) LPE Installation 688 Class	A		-	-	-	-	-	-	-	-	0.553	-	-	0.564	-	-	-	-	-	0.564
1.29) LPE Production Engineering (11)	A		-	-	-	-	-	0.852	-	-	0.168	-	-	0.168	-	-	-	-	-	0.168
1.30) Central Air Monitoring System (CAMS) Modernization (12)	A		-	-	-	-	-	0.654	-	-	3.652	-	-	1.630	-	-	-	-	-	1.630
1.31) SSN Escape Modernization (13)	A		-	-	2.635	-	-	1.000	-	-	-	-	-	-	-	-	-	-	-	-
1.32) Virginia Class Drawing Updates (14)	A		-	-	2.200	-	-	2.080	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Aggregated Items Title: Submarine Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.33) SSN HM&E System Sustainment (15)	A		-	-	-	-	-	2.373	-	-	1.500	-	-	2.747	-	-	-	-	-	2.747
1.34) VA Class Machinery Control System Modernization (16)	A		-	-	-	-	-	9.117	-	-	3.946	-	-	8.104	-	-	-	-	-	8.104
1.35) Emergency Diesel Generator Reliability Upgrades (17)	A		-	-	-	-	-	-	-	-	1.479	-	-	3.243	-	-	-	-	-	3.243
1.36) VACL Battery Management System Upgrade (18)	A		-	-	-	-	-	-	-	-	1.929	-	-	4.763	-	-	-	-	-	4.763
1.37) VACL Pressure Hull Castings (19)	A		-	-	-	-	-	-	-	-	8.519	-	-	8.500	-	-	-	-	-	8.500
1.38) VACL Modified Tailcone (20)	A		-	-	-	-	-	-	-	-	0.700	-	-	0.350	-	-	-	-	-	0.350
1.39) SWCL San Pump Upgrade (21)	A		-	-	-	-	-	-	-	-	1.500	-	-	1.530	-	-	-	-	-	1.530
1.40) Periodic Tech Refresh of COTS Systems (PTROCS) (22)	A		-	-	-	-	-	-	-	-	3.010	-	-	3.744	-	-	-	-	-	3.744
1.41) VACL Propulsion Shaft Procurment (23)	A		-	-	-	-	-	-	-	-	5.900	-	-	-	-	-	-	-	-	-
1.42) SEAWOLF Class Ship Control System Sustainment (24)	A		-	-	-	-	-	3.460	-	-	5.310	-	-	-	-	-	-	-	-	-
Subtotal: 1) PB002/PB5IN SSN Class Component Upgrades			**-**	**-**	***92.758***	**-**	**-**	***53.875***	**-**	**-**	***64.513***	**-**	**-**	***56.339***	**-**	**-**	**-**	**-**	**-**	***56.339***
2) PB004/PB5IN Facilities/Lab Upgrades																				
2.1) Acoustic Range (25)	A		-	-	36.337	-	-	7.684	-	-	24.409	-	-	33.330	-	-	-	-	-	33.330
2.2) Magnetic Silencing Facility, New London (26)	A		-	-	-	-	-	13.900	-	-	3.400	-	-	-	-	-	-	-	-	-
2.3) Pacific Fleet Submerged Electro-Magnetic Range (27)	A		-	-	-	-	-	-	-	-	-	-	-	1.296	-	-	-	-	-	1.296

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Aggregated Items Title: Submarine Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Subtotal: 2) PB004/PB5IN Facilities/ Lab Upgrades			**-**	**-**	***36.337***	**-**	**-**	***21.584***	**-**	**-**	***27.809***	**-**	**-**	***34.626***	**-**	**-**	**-**	**-**	**-**	***34.626***
3) PB005/PB5IN Weapon Launching Handling System																				
3.1) Production Engineering [28]	A		-	-	0.200	-	-	0.200	-	-	0.300	-	-	0.300	-	-	-	-	-	0.300
3.2) 2S Cog Material	A		-	-	0.061	-	-	0.065	-	-	0.065	-	-	0.067	-	-	-	-	-	0.067
3.3) TT/TEP/ICL/ WSHS/WLC	A		-	-	1.081	-	-	2.230	-	-	0.940	-	-	0.965	-	-	-	-	-	0.965
3.4) Misc. Test Equipment	A		-	-	0.166	-	-	0.166	-	-	0.166	-	-	0.170	-	-	-	-	-	0.170
3.5) Test Facility Equipment	A		-	-	0.134	-	-	0.134	-	-	0.134	-	-	0.138	-	-	-	-	-	0.138
3.6) ORDALT Procurement	A		-	-	0.050	-	-	0.100	-	-	0.150	-	-	0.150	-	-	-	-	-	0.150
3.7) ORDALT Installation	A		-	-	0.756	-	-	0.770	-	-	0.787	-	-	0.802	-	-	-	-	-	0.802
3.8) Weapons Launch Console (WLC) Tech Refresh [29]	A		-	-	-	-	-	-	-	-	4.440	-	-	3.380	-	-	-	-	-	3.380
3.9) Weapons Handling Systems-EPCC Tech Refresh [30]	A		-	-	-	-	-	-	-	-	1.562	-	-	3.184	-	-	-	-	-	3.184
3.10) Torpedo Tube OPROD Updgrade [31]	A		-	-	-	-	-	-	-	-	1.000	-	-	1.020	-	-	-	-	-	1.020
Subtotal: 3) PB005/PB5IN Weapon Launching Handling System			**-**	**-**	***2.448***	**-**	**-**	***3.665***	**-**	**-**	***9.544***	**-**	**-**	***10.176***	**-**	**-**	**-**	**-**	**-**	***10.176***
4) PB008/PB5IN SSTG Governors																				
4.1) SSTG MOD 25 Installation/DSA	A		-	-	0.783	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) PB008/PB5IN SSTG Governors			**-**	**-**	***0.783***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) PB009/PB5IN VA Class SOF																				
5.1) SOF Upgrades & Alterations [32]	A		-	-	-	-	-	1.470	-	-	0.939	-	-	0.958	-	-	-	-	-	0.958
5.2) Install Diver Oxygen Treatment System/Lockout Trunk on SSN 777 & 778 [33]	A		-	-	0.957	-	-	5.172	-	-	4.805	-	-	-	-	-	-	-	-	-
5.3) Dry Deck Shelters Modernization [34]	A		-	-	-	-	-	-	-	-	-	-	-	4.824	-	-	-	-	-	4.824

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment	**Aggregated Items Title:** Submarine Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Subtotal: 5) PB009/PB5IN VA Class SOF			-	-	*0.957*	-	-	*6.642*	-	-	*5.744*	-	-	*5.782*	-	-	-	-	-	*5.782*
Total			-	-	133.283	-	-	85.766	-	-	107.610	-	-	106.923	-	-	-	-	-	106.923

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) 1.3 & 1.4 SSTG Digital Voltage Regulator program upgrades a total of 6 ships. Shipset procurement lead time is two years.

(2) 1.6 & 1.7 ICS Block 5 Upgrade: ShipAlt 4884K Procurement funding began in FY20 with installs beginning in FY21. This funding profile supports 10 procurements and 9 installs across the FYDP, with remaining installs outside the FYDP.

(3) 1.10 & 1.11 DGIOTS Shock Modification ShipAlt 4776K: Procurement and installation occurs in the same year (less than 12-month lead time) executing 2 per year in FYs 19-20, 3 per year in FYs 21-22, and 1 per year in FYs 23-24.

(4) 1.12 & 1.13 Forward Automatic Bus Transfer Power Mod: Procurement and installation occurs in the same year (less than 12 months lead time), executing 2 per year in FYs 20-23.

(5) 1.14 & 1.15 MRO Shock Mod ShipAlt 4629K funding plan is to procure and install a total of 8 units.

(6) 1.17 & 1.18 ShipAlt 5062K Circuit D/Cathodic Protection Sys OER funding plan is to procure and install a total of 9 units.

(7) 1.19, 1.20 & 1.21 SSTG Reliability Upgrades Backfit procurement start in FY22 and installations start in FY23 for a total of 10 ships. SubTeamOne Action Item 2018-027-01 Modifications are required to stop mandatory replacement of SSTG magnetic bearings.

(8) 1.22 Portable Ship Control Units: Installs previous purchased modernized PSCU systems under S/A 4776K.

(9) 1.23 & 1.24 High Pressure Air Dryer funds NRE Design Development in FYs 20-22 and procurement in FYs 21-23 for applicable ships and for rotatable pool.

(10) 1.27 & 1.28 Low-pressure Electrolyzer (LPE) funding transferred from BLI 0990. Procurements have a 18 month lead time. Program funding procures and installs a total of 7 units scheduled to coincide with 688 class refueling overhauls. First unit is procured in FY21 under BLI 0990 for FY23 installation. Second unit will be procured in FY22.

(11) 1.29 LPE Production Engineering - Funds efforts that support sustainability of LPE units on in-service SEAWOLF & VIRGINIA class submarines.

(12) 1.30 Central Atmosphere Monitoring System (CAMS) Modernization - Funds efforts to develop, qualify and implement modernization solutions that allow long term sustainment of the CAMS system

(13) 1.31 SSN Escape Modernization - Develops, certifies and installs safety critical modifications to SSN escape truck hatches and operating systems to mitigate recently discovered design deficiencies that would prevent proper operation of submarine escape equipment in a disabled submarine (DISSUB) scenario in which the vessel comes to rest at an angle. Also procures shipalt to protect submarine rescue seats on SSNs from damage.

(14) 1.32 Virginia Class Drawing Updates - Corrects deficiencies in VIRGINIA class Selected Record Drawings (SRDs) resulting from documentation of design changes via various notes and engineering requests instead of revising the base drawing.

(15) 1.33 SSN HM&E System Sustainment - Funds development and implementation of various minor critical alterations to in-service SSN HM&E systems. This funding line differs from the PTROCS line in that is support modernization of hardware items such as lifelines, hatch clips, pumps, etc. whereas PTROCS support modernization driven by obsolescence of COTS based control systems.

(16) 1.34 VA Class Machinery Control System Modernization - Procures and installs SHIPALT 4937K to upgrade the legacy systems to the Power PC processor based system used on Block III/IV ships & SHIPALT 4981K to modernize the legacy Propulsion System Test Device.

(17) 1.35 Emergency Diesel Generator Reliability Upgrades Funds procurement and installation of various alterations required to support sustainment and reliable operation of SSN Emergency Diesel Generators.

(18) 1.36 VACL Battery Management System Upgrade - Funding is requested to replace the legacy systems starting with VA class block III boats with the new design Battery Management System (BMS) used on VA class block V.

(19) 1.37 VACL Pressure Hull Castings - Funds replacement of hull castings identified to have significant defects resulting from improper vendor heat treatment of these large castings.

(20) 1.38 VACL Modified Tailcone - Modified tailcone, developed by PMS 450, mitigates vulnerability that imposes operational restriction on VA Class SSNs.

(21) 1.39 SWCL San Pump Upgrade Procures and installs modified OHIO class sanitary pumps on SEAWOLF class submarines to eliminate the requirement to blow tanks overboard with high pressure air.

(22) 1.40 Periodic Tech Refresh of COTS Systems (PTROCS) - Provides funding to support design and development of modernization efforts for emerging COTS obsolescence issues.

(23) 1.41 VACL Propulsion Shaft Procurement procures additional main propulsion shafts for VIRGINIA class submarines to support an adequate rotational pool of refurbished ready for install shafts.

(24) 1.42 Funds modernization efforts for SEAWOLF class unique ship control system hardware, software and test systems.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment	**Aggregated Items Title:** Submarine Support Equipment

(25) 2.1 Acoustic Range - In order to meet the acoustic requirements identified in CNO Specific Operational Requirements 46-28 (assessment of ship's acoustic posture, etc.) and NAVSEAINST C9073.2B (Acoustic Surveys Policy), this budget line increases from FY23 to FY24 to support STAFAC Recapitalization. The STAFAC facility reaches end of design life in 2023 and must be upgraded with additional capability in order to validate COLUMBIA (CLB) Class CDD stealth requirements. CLB test schedule drives Recap timeline.

(26) 2.2 Magnetic Silencing - In order to meet the requirements for magnetic silencing and surveillance, as identified in CNO Instruction OPNAVINST 8950.2H, this budget line is in support of the replacement/relocation of the New London underwater electromagnetic measurement system (UEMMS) in the Thames River. The current range is being deactivated due to Electric Boat waterfront expansion, which encompasses the existing range. Project timelines are aligned with/ driven by river dredging requirements. Requirement drops from FY23 to FY24 as all construction work will be completed in FY24.

(27) 2.3 Pacific Fleet Submerged Electro-Magnetic Range - New effort starting in FY24 fund the installation of the Pacific Fleet Submerged Electro-Magnetic Range, a submerged Underwater Electromagnetic (UEM) measurement capability in the PACFLT AOR, located at the Pacific Missile Range Facility (PMRF) in Hawaii. This facility will be similar to the system currently at the South Florida Ocean Measurement Facility (SFOMF) in Fort Lauderdale, FL., and would support VIRGINIA Class and future submarine classes.

(28) 3.1 - 3.7 Sub Weapons Launch/ Handling Support funds several projects that support the modernization of the Submarine Weapons Launch/ Handling Support equipment and systems.

(29) 3.8 Weapons Launch Console (WLC) Tech Refresh - Funds design, procurement and installation of modification to Virginia block I-IV weapons launch consoles to mitigate obsolete components and ensure interoperability with future SWFTS upgrades. Installation is planned to align with TI-24 SFWTS upgrades.

(30) 3.9 Weapons Handling Systems-EPCC Tech Refresh - Funds design, procurement and install of new design weapons handling electromechanical power conditioner and control (EPCC) systems for VIRGINIA block I-IV ships that are supportable and maximize commonality with VIRGINIA block V submarines.

(31) 3.10 Torpedo Tube OPROD Upgrade - Funds procurement and installation of improved design torpedo tube operating rods to mitigate low fatigue life deficiency requiring frequent replacement of current design rods.

(32) 5.1 SOF upgrades and alteration funds is for SOF designated VACL submarine investments for modernization and product improvements required to achieve and maintain the SOF operational availability and presence requirements. Additional funding programmed over the FYDP addresses component or equipment performance deficiencies, obsolescence issues, and DMSMS for the SOF VACL HOSUBs. Requirement per OPNAV N97 Ltr. SerN87/10U160461 (Subj: Submarine Requirements to Support SOF Delivery from SSGN and SSN).

(33) 5.2 Install Diver Oxygen Treatment System/Lockout Trunk on SSN 777 & 778 funds installation of Diver Oxygen Treatment System (DOTS) and certification of Lockout Trunk (LOT) on Special Operations Forces (SOF) designated submarines SSN777 and 778 to support NAVY-SOCOM requirements. Requirement per OPNAV N97 Letter Ser N87/10U160461, Submarine Requirements to Support SOF Delivery from SSGN and SSN.

(34) 5.3 Funding to continue modernization of the Dry Deck Shelters based on MOA between OPNAV N97, USSOCOM, COMNAVSPECWARCOM, and NAVSEA dated 4 June 2019 which promotes an agreement to continue the cost share agreement between the Undersea Enterprise and SOCOM in support of modernizing the remaining DDS.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment	**Modification Number / Title:** 1 / PB002 Acoustic Superiority Machinery Alterations
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	6.700	2.518	8.965	5.603	0.000	5.603	4.934	5.829	5.674	5.787	23.433	69.443
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	6.700	2.518	8.965	5.603	0.000	5.603	4.934	5.829	5.674	5.787	23.433	69.443
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**6.700**	**2.518**	**8.965**	**5.603**	**0.000**	**5.603**	**4.934**	**5.829**	**5.674**	**5.787**	**23.433**	**69.443**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[Acoustic Superiority Machinery Alterations] Acoustic Superiority backfit alterations are based on design and material developed for installation on USS SOUTH DAKOTA (SSN 790) as part of the South Dakota Improvement Program (SDIP) during PSA.

This line funds the AS machinery modifications. The second component of the AS program, the LVA sonar, is funded under line item 2150

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment	**Modification Number / Title:** 1 / PB002 Acoustic Superiority Machinery Alterations
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: PB002 Acoustic Superiority Machinery Alterations												
B Kits												
Recurring												
1.1.1) Machinery Alterations - Material - NonOrganic	- / -	2 / 1.048	1 / 0.534	1 / 0.545	- / -	1 / 0.545	1 / 0.555	1 / 0.567	1 / 0.307	1 / 0.313	4 / 1.316	12 / 5.185
Subtotal: Recurring	*- / 0.000*	*- / 1.048*	*- / 0.534*	*- / 0.545*	*- / -*	*- / 0.545*	*- / 0.555*	*- / 0.567*	*- / 0.307*	*- / 0.313*	*- / 1.316*	*- / 5.185*
Subtotal: PB002 Acoustic Superiority Machinery Alterations	*- / -*	*2 / 1.048*	*1 / 0.534*	*1 / 0.545*	*- / -*	*1 / 0.545*	*1 / 0.555*	*1 / 0.567*	*1 / 0.307*	*1 / 0.313*	*4 / 1.316*	*12 / 5.185*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 1.048*	*- / 0.534*	*- / 0.545*	*- / -*	*- / 0.545*	*- / 0.555*	*- / 0.567*	*- / 0.307*	*- / 0.313*	*- / 1.316*	*- / 5.185*
Support *(All Modification Items)*												
2.1) Machinery Alterations Design & Development/LVA S/A Redesign	- / 6.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.700
2.2) Machinery Alterations Installation Planning	- / -	2 / 1.470	- / -	1 / 0.765	- / -	1 / 0.765	- / -	1 / 0.796	1 / 0.812	1 / 0.828	3 / 2.585	9 / 7.256
Subtotal: Support	*- / 6.700*	*- / 1.470*	*- / -*	*- / 0.765*	*- / -*	*- / 0.765*	*- / -*	*- / 0.796*	*- / 0.812*	*- / 0.828*	*- / 2.585*	*- / 13.956*
Installation												
Modification Item 1 of 1: PB002 Acoustic Superiority Machinery Alterations	- / 0.000	- / 0.000	- / 8.431	- / 4.293	- / 0.000	- / 4.293	- / 4.379	- / 4.466	- / 4.555	- / 4.646	- / 19.532	- / 50.302
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 8.431*	*- / 4.293*	*- / -*	*- / 4.293*	*- / 4.379*	*- / 4.466*	*- / 4.555*	*- / 4.646*	*- / 19.532*	*- / 50.302*
Total												
Total Cost (Procurement + Support + Installation)	**6.700**	**2.518**	**8.965**	**5.603**	**0.000**	**5.603**	**4.934**	**5.829**	**5.674**	**5.787**	**23.433**	**69.443**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment	**Modification Number / Title:** 1 / PB002 Acoustic Superiority Machinery Alterations

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: PB002 Acoustic Superiority Machinery Alterations

Manufacturer Information

Manufacturer Name: Various [35]

Manufacturer Location: New MFG - Loc

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Oct 2021	Oct 2022	Oct 2023	Oct 2024		Oct 2026	Oct 2027
Delivery Dates	Oct 2022	Oct 2023	Oct 2024	Oct 2025		Oct 2027	Oct 2028

Installation Information

Method of Implementation: [none specified]:: Installation Name: Machinery Alterations - Material

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	2 / 8.431	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 8.431
FY 2023	- / -	- / -	- / -	1 / 4.293	0 / 0.000	1 / 4.293	- / -	- / -	- / -	- / -	0 / 0.000	1 / 4.293
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.379	- / -	- / -	- / -	0 / 0.000	1 / 4.379
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.466	- / -	- / -	0 / 0.000	1 / 4.466
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.555	- / -	0 / 0.000	1 / 4.555
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.646	0 / 0.000	1 / 4.646
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.739	1 / 4.739
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 14.793	4 / 14.793
Total	- / -	- / -	2 / 8.431	1 / 4.293	0 / 0.000	1 / 4.293	1 / 4.379	1 / 4.466	1 / 4.555	1 / 4.646	5 / 19.532	12 / 50.302

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	2	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	5	12
Out	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	6	12

Footnotes:

[35] AS machinery modifications consist of a number of individual shipalts which use material from various vendors

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0942 / Virginia Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0604558N, 0204281N
Line Item MDAP/MAIS Code: 516		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,028.027	22.669	32.300	32.076	0.000	32.076	43.597	52.098	39.771	40.568	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,028.027	22.669	32.300	32.076	0.000	32.076	43.597	52.098	39.771	40.568	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,028.027**	**22.669**	**32.300**	**32.076**	**0.000**	**32.076**	**43.597**	**52.098**	**39.771**	**40.568**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The VIRGINIA Class BLI 0942 provides a wide range of materials required to operate, test, support and maintain the viability of VIRGINIA SSN774 Class Submarines. Additional details are provided below for each effort.

The Major Shore Spares component includes rotatable pool and insurance spares. Propulsor rotatable pool assets support planned maintenance during scheduled availabilities by decreasing equipment turn-around time/availability duration. Rotatable pool program equipment includes the high pressure air compressor, various pump/motor assemblies, radar mast, ventilation fans and thin line towed array components and other components.

The Test and Evaluation (T&E) component includes upgrading the afloat acoustic system required to conduct TECHEVAL/OPEVAL satisfactorily, efficiently, and with minimal risk of equipment failure. Conduct hardware and software development, procurement, maintenance, and operations as required to achieve and maintain the submarine acoustic signatures trials program. The resultant capabilities support the Submarine Acoustic Trials Enterprise, which includes the VIRGINIA Class Submarine test and evaluation program.

VPT Platforms and Intermediate and Depot (I&D) Support Equipment funding includes Vertical Launch System (VLS) Peculiar Support Equipment (PSE) for All-Up Round Simulators (AURS)/All-Up Round (AUR) Ballast Cans necessary to conduct TECHEVAL/OPEVAL and provide ballast for ship operation. VIRGINIA Class Submarines must maintain a required Platform to Submarine ratio of 0.6 through the FYDP. The variable procurement quantities associated with these items are based on inventory required to maintain this ratio.

Non-Tactical Data Processing System (NTDPS)-Nosis funding includes shipboard wireless LAN that provides a ship wide (forward of the reactor compartment) intranet (Non-classified Internet Protocol (IP) Router Network (Unclassified Enclave) (NIPRNET)) that significantly enhances the quality of the work by facilitating electronic correspondence, personnel data management, collaborative services, interactive whiteboard, multi-user chat, and access to these sites: Fleet Training Management & Planning System/Navy Training Management & Planning System (FTMPS/NTMPS), Composite Health Care System (CHCS), prescriptions, MYPAY-Defense Finance and Accounting Service (DFAS), Navy Personnel Command (NPC), Bureau of Naval Personnel (BUPERS), email, Fleet Technical Support Center, Atlantic (FTSCLANT), Submarine Maintenance Engineering, Planning and Procurement (SUBMEPP), and Navy Knowledge Online (NKO).

Maintenance Planning System funds will be used to help ship programs identify, plan, and execute maintenance activities as well as improve efficiently at all levels (performed by ship's force as well as organizational/depot level) by creating a set of tools to provide a robust, distributed and comprehensive training and maintenance solution delivering dynamic content. This set of tools and the associated ship-

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0942 / Virginia Class Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0604558N, 0204281N
Line Item MDAP/MAIS Code: 516		

to-shore data environment will reduce Operations & Maintenance, Navy (OM&N) funding over time. This will be fielded as part of the Non-Tactical Data Processing System (NTDPS)-Nosis to VIRGINIA Class Submarines.

Ship Control System (SCS) Technology Modernization funding supports obsolescence management of the Fly-By-Wire (FBW) SCS installed and used to maneuver in-service VIRGINIA Class fast attack submarines. This funding provides for upgrading software and hardware to incorporate necessary safety, reliability, and performance improvements.

Additionally, the continuous ship upgrades necessary to maintain class viability of the earlier ships are included in this funding line. This is particularly important for Commercial Off-the-Shelf (COTS) Technology Refreshment and Technology Upgrades for Non-Propulsion Electronic Systems (NPES). The class level of modernization and capability rests on available resources.

[P40A / Auxiliary Equipment]: Auxiliary equipment component includes funding for ladders and ladder storage containers for Sail Racetracks, Logistics Escape Trunk/Logistics Plug Trunk (LET/LPT) and other equipment such as I&D material, support material for VPT, and storage containers for Center Cell Access Port(CCAP)/All Up Round Volumetric Shape(AURS)/All Up Round Ballast Grade B(AURBb).

[P40A / Non-Tactical Data Processing System - Nosis]: Provide software and hardware updates, software licenses and technical and logistics support to the Non-Tactical Data Processing System (NTDPS).

[P40A / Ship Control System Technology Modernization]: Provides for the procurement of materials necessary to modernize VIRGINIA Class Fly-By-Wire (FBW) Ship Control System (SCS) to sustain interfaces and technology baseline with the connecting Government Furnished sub-systems contained in the Non-Propulsion Electronics System suite.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0942 / Virginia Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604558N, 0204281N

Line Item MDAP/MAIS Code: 516

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	Virginia Class Support Equipment				- / 751.974	- / 15.175	- / 24.670	- / 24.293	- / -	- / 24.293
P-3a	1 / H1RC6 - Major Shore Spares (Various)				- / 276.053	- / 7.494	- / 7.630	- / 7.783	- / 0.000	- / 7.783
P-40	**Total Gross/Weapon System Cost**				**- / 1,028.027**	**- / 22.669**	**- / 32.300**	**- / 32.076**	**- / 0.000**	**- / 32.076**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	Virginia Class Support Equipment				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / H1RC6 - Major Shore Spares (Various)				- / 7.939	- / 8.098	- / 8.260	- / 8.425	Continuing	Continuing
P-40	**Total Gross/Weapon System Cost**				**- / 43.597**	**- / 52.098**	**- / 39.771**	**- / 40.568**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2024 provides for the continued procurement of support equipment to ensure the viability of VIRGINIA Class Submarines and continues procurement of materials necessary to modernize VIRGINIA Class Fly-By-Wire (FBW) Ship Control System (SCS) to sustain interfaces and technology baseline with the connecting Government Furnished sub-systems contained in the Non-Propulsion Electronics System suite.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0942 / Virginia Class Support Equipment	**Aggregated Items Title:** Virginia Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) All Prior Years																				
1.1) All Prior Years (APY)	A		-	-	647.750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) All Prior Years			**-**	**-**	***647.750***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) H1RC2 TEST & EVALUATION EQUIPMENT																				
2.1) Test & Evaluation Measuring Equipment	A		-	-	38.201	-	-	2.029	-	-	2.111	-	-	2.139	-	-	-	-	-	2.139
Subtotal: 2) H1RC2 TEST & EVALUATION EQUIPMENT			**-**	**-**	***38.201***	**-**	**-**	***2.029***	**-**	**-**	***2.111***	**-**	**-**	***2.139***	**-**	**-**	**-**	**-**	**-**	***2.139***
3) H1RC8 - VPT and I&D Support Equipment																				
3.1) Weapons Equipment: VPT Platform (1)	A		1,811K	7	12.675	1,840K	3	5.520	1,948K	2	3.897	-	-	-	-	-	-	-	-	-
3.2) Industrial Equipment: Sail Racetracks	A		307,200.00	10	3.072	318,000.00	1	0.318	324,500.00	1	0.325	331,000.00	2	0.662	-	-	-	331,000.00	2	0.662
3.3) Auxiliary Equipment (2)	A		-	-	1.323	-	-	0.357	-	-	2.077	-	-	5.746	-	-	-	-	-	5.746
Subtotal: 3) H1RC8 - VPT and I&D Support Equipment			**-**	**-**	***17.070***	**-**	**-**	***6.195***	**-**	**-**	***6.299***	**-**	**-**	***6.408***	**-**	**-**	**-**	**-**	**-**	***6.408***
4) H1RC13 TECH INSERTION TECH REFRESH & UPGRADES																				
4.1) Shipboard Mobile Computing NTDPS (ULAN + SW Enclave + PDOCS + Upgrades)	A		-	-	27.307	-	-	2.643	-	-	2.754	-	-	2.819	-	-	-	-	-	2.819
4.2) Non-Tactical Data Processing System - Nosis	A		-	-	21.646	-	-	4.308	-	-	4.564	-	-	4.521	-	-	-	-	-	4.521
4.3) Ship Control System Technology Modernization (3)	A		-	-	-	-	-	-	-	-	8.942	-	-	8.406	-	-	-	-	-	8.406
Subtotal: 4) H1RC13 TECH INSERTION TECH REFRESH & UPGRADES			**-**	**-**	***48.953***	**-**	**-**	***6.951***	**-**	**-**	***16.260***	**-**	**-**	***15.746***	**-**	**-**	**-**	**-**	**-**	***15.746***
Total			**-**	**-**	**751.974**	**-**	**-**	**15.175**	**-**	**-**	**24.670**	**-**	**-**	**24.293**	**-**	**-**	**-**	**-**	**-**	**24.293**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) VIRGINIA Class Submarines must maintain a required Platform to Submarine ratio of 0.6 through the FYDP. The variable procurement quantities associated with these items are based on inventory required to maintain this ratio.

(2) The variable cost for Auxiliary Equipment are based on platform configuration. Increased costs beginning in FY 2023 support procurement of I&D material associated with the introduction of VPM in Block V.

(3) Funds beginning in FY 2023 provide for the procurement of materials necessary to modernize VIRGINIA Class Fly-By-Wire (FBW) Ship Control System (SCS) to sustain interfaces and technology baseline with the connecting Government Furnished sub-systems contained in the NPES suite.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0942 / Virginia Class Support Equipment	**Modification Number / Title:** 1 / H1RC6 - Major Shore Spares
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	276.053	7.494	7.630	7.783	0.000	7.783	7.939	8.098	8.260	8.425	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	276.053	7.494	7.630	7.783	0.000	7.783	7.939	8.098	8.260	8.425	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**276.053**	**7.494**	**7.630**	**7.783**	**0.000**	**7.783**	**7.939**	**8.098**	**8.260**	**8.425**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procure equipment and materials necessary to support the VIRGINIA Class submarine program. Materials are as large as rotors and as small as anodes and fasteners. VIRGINIA Class rotatable pool rotors are removed, refurbished, and placed into a pool. There is no set installation schedule as rotors, once available, are installed on subsequent availabilities.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0942 / Virginia Class Support Equipment	**Modification Number / Title:** 1 / H1RC6 - Major Shore Spares
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VA Class Submarine	**Modification Type:** Various	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: H1RC6 - Major Shore Spares												
B Kits												
Non-Recurring												
1.1.1) H1RC6 Prior Years - Organic	- / 172.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 172.620
1.1.2) Propulsor - Rotatable Pool - Organic (4)	9 / 62.435	1 / 7.494	1 / 7.630	1 / 7.783	- / -	1 / 7.783	1 / 7.939	1 / 8.098	1 / 8.260	1 / 8.425	Continuing	Continuing
1.1.3) NFPC High Speed Machine - Organic	- / 40.998	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 40.998
Subtotal: Non-Recurring	*- / 276.053*	*- / 7.494*	*- / 7.630*	*- / 7.783*	*- / -*	*- / 7.783*	*- / 7.939*	*- / 8.098*	*- / 8.260*	*- / 8.425*	*Continuing*	*Continuing*
Subtotal: H1RC6 - Major Shore Spares	*9 / 276.053*	*1 / 7.494*	*1 / 7.630*	*1 / 7.783*	*- / -*	*1 / 7.783*	*1 / 7.939*	*1 / 8.098*	*1 / 8.260*	*1 / 8.425*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 276.053*	*- / 7.494*	*- / 7.630*	*- / 7.783*	*- / -*	*- / 7.783*	*- / 7.939*	*- / 8.098*	*- / 8.260*	*- / 8.425*	*Continuing*	*Continuing*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**276.053**	**7.494**	**7.630**	**7.783**	**0.000**	**7.783**	**7.939**	**8.098**	**8.260**	**8.425**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0942 / Virginia Class Support Equipment	**Modification Number / Title:** 1 / H1RC6 - Major Shore Spares
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: H1RC6 - Major Shore Spares		

Footnotes:

(4) Rotatable Pool increases slightly beyond inflation due to the material volatility of components. Further details can be provided at the appropriate classification level.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	272.145	9.640	22.238	18.832	0.000	18.832	7.318	4.114	16.527	16.931	-	367.745
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	272.145	9.640	22.238	18.832	0.000	18.832	7.318	4.114	16.527	16.931	-	367.745
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**272.145**	**9.640**	**22.238**	**18.832**	**0.000**	**18.832**	**7.318**	**4.114**	**16.527**	**16.931**	**-**	**367.745**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The LCS Class Support Equipment line procures long-lead major end items and sub-component kits required for repairs to both variants of Littoral Combat Ships (LCS). The items procured mitigate major long-lead replacement times due to system failures and casualties and increases availability of vital Fleet assets by reducing repair part procurement and delivery times. Funding procures support equipment, required ancillary equipment, and associated engineering and technical support services for LCS.

LN001 - LCS Battle Spares
Battle Spare inventory is not tied to specific ship hulls and is available on an as need basis to meet Fleet requirements. This line procures shore-based battle spares, ensuring their availability in the event of a failure or major casualty to key ship systems. Systems that require shore-based spares include gas turbines, diesel engines and generators, propulsion systems, reduction gears, Auxiliary Propulsion Units (APUs), Machinery Plant Control & Monitoring Systems (MPCMSs), Command/Control/Communications/Computers/Collaboration/Intelligence (C5I), Combat Systems, AIS Laptops and mission package support equipment. Inventory objectives are determined by the LCS Reliability, Maintainability, and Availability (RMA) data, NAVSEA RMA guidance, the critical application of equipment, and inputs from the NAVSEA 05 technical community.

LN002 - LCS Water Jet Spares
Both LCS variants are propelled by water jets; this line procures spare water jets and water jet components. There are two LCS variants, the FREEDOM variant and the INDEPENDENCE variant, each using four water jets. The configurations vary between ships; there are five water jet configurations. The FREEDOM variant uses Rolls-Royce water jets and the INDEPENDENCE variant uses Wartsila Lips water jets. The water jet assemblies are mounted externally on the ships' transom. These assemblies will be designated as battle spares material and support a rotatable pool for life cycle sustainment. In the event of a casualty the broken water jet is replaced with an operational asset from the water jet inventory pool and the non functional asset is sent to the depot to be repaired.

LN003 - Engineering Services
This funding provides engineering and technical support for LCS Class Support Equipment. Services include the establishment of Technical Data Packages (TDPs) and the creation of associated depot level repair parts lists/installation requirements. Funding is also provided for Non-Recurring Engineering (NRE) and Design Services Allocation (DSA) modernization efforts tied to the ship availabilities.

LN006 - LCS Ships Class Ancillary Equipment
This funding procures the connective equipment necessary to ensure fit and function of procured LCS Class Support Equipment when installed.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	LCS Class Support Equipment	P-5a, P-21			- / 272.145	- / 9.640	- / 22.238	- / 18.832	- / -	- / 18.832
P-40	**Total Gross/Weapon System Cost**				**- / 272.145**	**- / 9.640**	**- / 22.238**	**- / 18.832**	**- / 0.000**	**- / 18.832**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The FY 2024 request supports procurement of multiple LCS Battlespares.
Changes to Twin-Boom Extensible Crane (Independence Variant), Multi Aircraft Nose & Tail Gear Integrated System (Independence Variant), Sea Giraffe 3D Radar (Independence Variant) and Air Conditioning Plant (Independence Variant) are in support of high failure equipment to address operational readiness.
Re-planned priority of previous high failure equipment from Freedom Variant to support shifting priority to Independence Variant: Main Propulsion Control & Monitoring System/Engineering Control System, ECM System and LCS 5AF Water Jets Spares (Freedom Variant), and other high failure equipment.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment	Aggregated Items Title: LCS Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) LN001 LCS Battle Spares																				
1.1) MAIN PROPULSION DIESEL ENGINE (INDEPENDENCE VARIANT)	A		20,277K	1	20.277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) MT-30 GAS TURBINE ENGINE (SUB-ASSEMBLY ENGINE FREEDOM VARIANT)	A		3,358K	3	10.073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) MT-30 GAS TURBINE ENGINE (FULL ENGINE FREEDOM VARIANT)(†)	A		16,540K	1	16.540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) SHIPS SERVICE DIESEL GENERATOR (INDEPENDENCE VARIANT)	A		3,158K	3	9.475	-	-	-	-	-	4.013	-	-	-	-	-	-	-	-	-
1.5) LAUNCH, RECOVERY, AND HANDLING SYSTEM (FREEDOM VARIANT)	A		5,324K	2	10.647	2,861K	2	5.722	-	-	-	-	-	-	-	-	-	-	-	-
1.6) INTEGRATED BRIDGE SYSTEM	A		924,000.00	1	0.924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.7) MT-30 GAS TURBINE ENGINE ANCILLARY EQUIPMENT (FREEDOM VARIANT)	A		8,354K	1	8.354	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.8) MAIN PROP. CONTRL & MONITORING SYS (MPCMS)/ ENGINEERING CONTRL SYS (ECS)	A		-	-	-	-	-	-	9,593K	1	9.593	-	-	-	-	-	-	-	-	-
1.9) MAIN PROP. CONTRL. & MONITOR SYS (MPCMS) Partial kit	A		750,000.00	1	0.750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.10) TWIN-BOOM EXTENSIBLE CRANE (INDEPENDENCE VARIANT)(†)	A		3,920K	2	7.839	-	-	-	-	-	-	4,796K	1	4.796	-	-	-	4,796K	1	4.796

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment	Aggregated Items Title: LCS Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.11) TRS-3D RADAR (FREEDOM VARIANT)	A		1,189K	3	3.566	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.12) SEA GIRAFFE 3D RADAR (INDEPENDENCE VARIANT) (1)(†)	A		1,856K	2	3.713	-	-	-	-	-	-	4,262K	3	12.786	-	-	-	4,262K	3	12.786
1.13) MULT. AIRCRAFT NOSE & TAILGEAR INTEGRATED SYS (INDEPENDENCE VARIANT)	A		450,000.00	2	0.900	-	-	-	-	-	-	206,300.00	3	0.619	-	-	-	206,300.00	3	0.619
1.14) REDUCTION GEAR (FREEDOM VARIANT)	A		13,614K	1	13.614	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.15) REDUCTION GEAR (INDEPENDENCE VARIANT)	A		6,449K	1	6.449	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.16) ELECTRONIC SUPPORT MEASURES	A		725,000.00	2	1.450	755,000.00	1	0.755	-	-	-	-	-	-	-	-	-	-	-	-
1.17) AUXILIARY PROPULSION UNIT	A		1,063K	3	3.188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.18) MAIN PROPULSION DIESEL ENGINE (FREEDOM VARIANT)	A		5,647K	2	11.294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.19) SHIPS SERVICE DIESEL GENERATOR (FREEDOM VARIANT)	A		812,000.00	4	3.248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.22) Star Safire III(†)	A		1,428K	1	1.428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.23) MK 110 57MM GUN(†)	A		9,606K	1	9.606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.24) Air Conditioning Plant	A		-	-	-	816,000.00	1	0.816	-	-	-	-	-	-	-	-	-	-	-	-
1.25) Shaft Coupling	A		-	-	-	885,000.00	1	0.885	-	-	-	-	-	-	-	-	-	-	-	-
1.26) TRS-4D RADAR/Partial Kit (FREEDOM VARIANT)(†)	A		829,000.00	1	0.829	829,000.00	1	0.829	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment	Aggregated Items Title: LCS Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.27) Boat Davit 5 AF(†)	A		295,000.00	1	0.295	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.28) Boat Davit 6 AF(†)	A		2,500K	1	2.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.29) AIS Laptops (Both Variants)	A		-	-	2.000	-	-	0.350	-	-	0.936	-	-	-	-	-	-	-	-	-
1.30) Water Purification (Congressional Add)	A		-	-	8.000	-	-	-	-	-	7.000	-	-	-	-	-	-	-	-	-
Subtotal: 1) LN001 LCS Battle Spares			**-**	**-**	***156.959***	**-**	**-**	***9.357***	**-**	**-**	***21.542***	**-**	**-**	***18.201***	**-**	**-**	**-**	**-**	**-**	***18.201***
2) LN002 LCS Water Jet Spares																				
2.1) WATERJET ASSEMBLY (FREEDOM VARIANT)	A		2,021K	8	16.168	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) WATERJET IMPELLER (INDEPENDENCE VARIANT)	A		1,501K	7	10.507	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) LN002 LCS Water Jet Spares			**-**	**-**	***26.675***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) LN002 LCS 5AF Water Jet Spares																				
3.1) Steerable Jet Assembly(†)	A		1,720K	5	8.602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) Boost Jet Assembly(†)	A		1,149K	6	6.896	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.3) Impeller Shaft Assembly(†)	A		1,020K	6	6.120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) LN002 LCS 5AF Water Jet Spares			**-**	**-**	***21.618***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) LN002 LCS 6AF Water Jet Spares																				
4.1) WLD 1500 Water Jet Assembly(†)	A		1,197K	7	8.377	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) WLD 1720 WJ Assembly(†)	A		803,285.71	7	5.623	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.3) WLD 1500 Shaft Assembly(†)	A		430,000.00	7	3.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.4) WLD 1720 Shaft Assembly(†)	A		430,000.00	7	3.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) LN002 LCS 6AF Water Jet Spares			**-**	**-**	***20.020***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) LN003 Engineering Services (TDPs & installation planning)																				

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment	**Aggregated Items Title:** LCS Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
5.1) Engineering Services (TDPs & installation planning)	A		-	-	0.902	-	-	0.112	-	-	0.413	-	-	0.610	-	-	-	-	-	0.610
5.2) Modernization Design/Eng Changes for LCS 4	A		-	-	7.347	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) LN003 Engineering Services (TDPs & installation planning)			**-**	**-**	***8.249***	**-**	**-**	***0.112***	**-**	**-**	***0.413***	**-**	**-**	***0.610***	**-**	**-**	**-**	**-**	**-**	***0.610***
6) LN004 Habitability Modification																				
6.1) HABITABILITY MOD (FREEDOM VARIANT)	A		3,113K	3	9.340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.2) HABITABILITY MOD (INDEPENDENCE VARIANT)	A		2,263K	4	9.051	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) LN004 Habitability Modification			**-**	**-**	***18.391***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
7) LN005 LCS Ship Class Safety Design Changes																				
7.1) Stern Ramp (FREEDOM VARIANT)	A		600,000.00	3	1.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.2) Bridge Wings (INDEPENDENCE VARIANT)	A		2,525K	4	10.100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) LN005 LCS Ship Class Safety Design Changes			**-**	**-**	***11.900***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
8) LN006 Ancillary Equipment																				
8.1) Ancillary Equipment	A		-	-	1.027	-	-	0.171	-	-	0.283	-	-	0.021	-	-	-	-	-	0.021
Subtotal: 8) LN006 Ancillary Equipment			**-**	**-**	***1.027***	**-**	**-**	***0.171***	**-**	**-**	***0.283***	**-**	**-**	***0.021***	**-**	**-**	**-**	**-**	**-**	***0.021***
9) LN007 Afloat Forward Staging Base SOF Mods																				
9.1) AFSB SOF Mods MLP-AFSB 3 Rev	A		-	-	7.306	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 9) LN007 Afloat Forward Staging Base SOF Mods			**-**	**-**	***7.306***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**272.145**	**-**	**-**	**9.640**	**-**	**-**	**22.238**	**-**	**-**	**18.832**	**-**	**-**	**-**	**-**	**-**	**18.832**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(1) FY24 represents a whole kit. FY25 represents a partial.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment	Aggregated Items: LCS Class Support Equipment

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) LN001 LCS Battle Spares												
1.3) MT-30 GAS TURBINE ENGINE (FULL ENGINE FREEDOM VARIANT)		2019	ROLLS ROYCE / WALEPOLE, MA	C / FFP	NAVSEA	Mar 2019	Mar 2020	1	16,540K	Y		
1.10) TWIN-BOOM EXTENSIBLE CRANE (INDEPENDENCE VARIANT)		2020	Maritime Applied Physics Corporation / Baltimore, MD	C / FFP	NAVSEA	Jun 2020	Dec 2021	1	4,139K	Y		Nov 2019
1.10) TWIN-BOOM EXTENSIBLE CRANE (INDEPENDENCE VARIANT)		2024	Trident Maritime Systems / WI	C / FFP	NAVSEA	Mar 2024	Mar 2024	1	4,796K	N	Aug 2026	
1.12) SEA GIRAFFE 3D RADAR (INDEPENDENCE VARIANT) (1)		2024	Saab Sensis Corporation / Reston, VA	C / TBD	** NO PCO **	Oct 2023	Jan 2025	3	4,262K	N		
1.22) Star Safire III		2020	KVR / Seattle, WA	C / FFP	SOSBATH	Jun 2020	Dec 2021	1	1,428K	Y		Nov 2019
1.23) MK 110 57MM GUN		2020	BAE / NASHUA NH	C / FFP	SOSBATH	Jun 2020	Jun 2022	1	9,606K	Y		Nov 2019
1.26) TRS-4D RADAR/Partial Kit (FREEDOM VARIANT)		2020	DLA / Philadelphia, PA	C / FFP	DLA	Apr 2020	Oct 2021	1	829,000.00	Y		Jun 2019
1.27) Boat Davit 5 AF		2020	DLA / Philadelphia, PA	C / FFP	DLA	Apr 2020	Apr 2020	1	295,000.00	Y		Jun 2019
1.28) Boat Davit 6 AF		2020	DLA / Philadelphia, PA	C / FFP	DLA2019-06	Apr 2020	Oct 2021	1	2,500K	Y		
3) LN002 LCS 5AF Water Jet Spares												
3.1) Steerable Jet Assembly(†)		2019	ROLLS ROYCE / WALEPOLE, MA	C / FFP	DLA	Feb 2020	Feb 2022	5	1,720K	Y		
3.2) Boost Jet Assembly(†)		2019	Rolls Royce / MS	C / FFP	DLA	Feb 2020	Feb 2022	6	1,149K	Y		
3.3) Impeller Shaft Assembly		2019	ROLLS ROYCE / WALEPOLE, MA	C / FFP	DLA	Feb 2020	Feb 2022	6	1,020K	Y		Nov 2018
4) LN002 LCS 6AF Water Jet Spares												
4.1) WLD 1500 Water Jet Assembly		2018	GD-BIW / Bath ME	C / FFP	SOSBATH	Sep 2019	Sep 2022	7	1,197K	Y		Nov 2017
4.2) WLD 1720 WJ Assembly		2018	GD-BIW / Bath ME	C / FFP	SOSBATH	Sep 2019	Sep 2021	7	803,333.33	Y		Nov 2017
4.3) WLD 1500 Shaft Assembly		2018	GD-BIW / Bath ME	C / FFP	SOSBATH	Sep 2019	Sep 2020	7	430,000.00	Y		Nov 2017
4.4) WLD 1720 Shaft Assembly		2018	GD-BIW / Bath ME	C / FFP	SOSBATH	Sep 2019	Sep 2020	7	430,000.00	Y		Nov 2017

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9

P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment

Aggregated Items: LCS Class Support Equipment

Items (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
										Calendar Year 2019												Calendar Year 2020									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3) LN002 LCS 5AF Water Jet Spares																															
3.1) Steerable Jet Assembly																															
	1	2019	NAVY	5	0	5																	A -	-	-	-	-	-	-	-	5
3.2) Boost Jet Assembly																															
	2	2019	NAVY	6	0	6																	A -	-	-	-	-	-	-	-	6
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment	**Aggregated Items:** LCS Class Support Equipment

Items (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3) LN002 LCS 5AF Water Jet Spares																															
3.1) Steerable Jet Assembly																															
	1	2019	NAVY	5	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1					0
3.2) Boost Jet Assembly																															
	2	2019	NAVY	6	0	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1					0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment	**Aggregated Items:** LCS Class Support Equipment

Items (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
										Calendar Year 2023												Calendar Year 2024									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3) LN002 LCS 5AF Water Jet Spares																															
3.1) Steerable Jet Assembly																															
	1	2019	NAVY	5	5	0																									0
3.2) Boost Jet Assembly																															
	2	2019	NAVY	6	6	0																									0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment	**Aggregated Items:** LCS Class Support Equipment

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	ROLLS ROYCE - WALEPOLE, MA			TBD	0	0	0	0	0	0	24	24
2	Rolls Royce - MS			TBD	0	0	0	0	0	0	24	24

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0945 / Submarine Batteries

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	148.309	21.834	24.137	28.221	0.000	28.221	28.108	28.549	29.155	29.879	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	148.309	21.834	24.137	28.221	0.000	28.221	28.108	28.549	29.155	29.879	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**148.309**	**21.834**	**24.137**	**28.221**	**0.000**	**28.221**	**28.108**	**28.549**	**29.155**	**29.879**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Increased funding in FY 2024 supports procurement of 1 additional battery ship set (17 vice 16 in FY 2023) and 1 VIRGINIA Class Battery Installation Tray. Variations in the individual class battery procurements are driven by Fleet requirements.

This program procures replacement Valve Regulated Lead Acid (VRLA) batteries for all classes of submarines (LOS ANGELES, SEAWOLF, OHIO SSBN/SSGNs and VIRGINIA) and program funds, manages and supports the VRLA In-Service Engineering Agent (ISEA) at NSWC Crane. The efforts of the ISEA are directly tied to maintaining readiness of the batteries in the fleet and testing, verification and validation of design and procedural changes to ensure battery performance meets operational needs. ISEA assessments and production engineering efforts support determinations of battery End-Of-Life (EOL) and allow proactive scheduling of battery replacements to minimize operational availability (Ao) impacts for the fleet.

Battery operation and capacity is critical to ship safety and reactor safety. Without acceptable battery capacity submarines cannot operator or deploy, which reduces the submarine force at a time when strategic requirements, force protection and intelligence gathering capabilities are in high demand by combatant commanders. Batteries have a finite life and are consumables; this budget procures replacement VRLA batteries throughout the submarine service life based on expected battery service life.

SEAWOLF class replacement batteries (HM009) are only procured in FY22, FY25 and FY26 due to the small number of boats in the class (3) and consequent limited need for this type of battery.

Yearly battery procurement costs are based on fixed per cell costs defined by a multiyear firm fixed price contract running from FY19-23. Cell cost in FY24-26 is extrapolated from the defined contract price in FY23 using the year to year escalation percentage defined in the contract. The quantity of cells required and mix of cell types varies from year to year as a function of fleet requirements, hence the overall battery procurement cost varies despite fixed baseline cell pricing.

HM002 LOS ANGELES SSN, HM008 OHIO Class SSBN/SSGN, HM009 SEAWOLF Class SSN, and HM010 VIRGINIA Class SSN: Procures replacement VRLA batteries for submarines in the respective classes. Yearly procurement quantities are level loaded based on expected average service life of batteries. The breakdown by class varies based on fleet replacement needs. These lines also procure battery installation tray sets. Battery installation trays are required for all installed batteries, and were procured during conversion/new construction, but must be removed, inspected, have cells removed/replaced and be reinstalled shipboard during battery replacement. Procurement of additional shipsets improves the logistics of battery replacement, thereby improving fleet Ao and reducing risk of cell damage due to waterfront handling as well as supporting replacement of worn/damaged installation trays as needed.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0945 / Submarine Batteries	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

HM830 Production Engineering: Naval Surface Warfare Center (NSWC) Crane, as the Acquisition Engineering Agent (AEA) and In-Service Engineering Agent (ISEA) monitors battery performance and schedules replacements with the fleet. NSWC Crane is tasked with leading a Government & Industry Root Cause Analysis (RCA) team to identify and address battery performance issues and provide corrective actions to operational submarines. NSWC Crane conducts qualification testing of delivered VRLA batteries and analysis of poor performing VRLA cells returned from operational submarines. Analysis of poor performing cells supports improvement to design and operating procedures aimed at increased battery life, reliability and predictability. Funding provided to Puget Sound and Portsmouth Naval Shipyards includes responsibilities for the VRLA battery inventory management, maintenance and storage.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0945 / Submarine Batteries

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Equipment	P-5a			- / 148.309	- / 21.834	- / 24.137	- / 28.221	- / -	- / 28.221
P-40	**Total Gross/Weapon System Cost**				**- / 148.309**	**- / 21.834**	**- / 24.137**	**- / 28.221**	**- / 0.000**	**- / 28.221**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Increased funding in FY 2024 supports 17 ship sets (vice 16 in FY 2023) and 1 VIRGINIA Class Battery Installation Tray. Variations in the individual class battery procurements are driven by Fleet requirements. FY 2024 funding also supports the procurement of replacement Valve Regulated Lead Acid (VRLA) batteries for LOS ANGELES (2); OHIO (8); VIRGINIA (7), 1 VIRGINIA class Battery Installation Tray; and associated production engineering.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Aggregated Items Title: Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) HM002 - LOS ANGELES Class Main Storage Battery																				
1.1) LA VRLA Battery Storage Boosting Packaging (1)(†)	A		639,875.00	24	15.357	715,666.67	6	4.294	765,000.00	4	3.060	803,000.00	2	1.606	-	-	-	803,000.00	2	1.606
1.2) LA Class VRLA Installation Tray (2)	A		164,000.00	3	0.492	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) Replacement Cells	A		-	-	0.188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) LA Class VRLA Installation Material	A		-	-	0.671	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) HM002 - LOS ANGELES Class Main Storage Battery			**-**	**-**	***16.708***	**-**	**-**	***4.294***	**-**	**-**	***3.060***	**-**	**-**	***1.606***	**-**	**-**	**-**	**-**	**-**	***1.606***
2) HM008 - OHIO Class Main Storage Battery																				
2.1) OH VRLA Battery Storage Boosting Packaging (3)(†)	A		986,000.00	18	17.748	1,125K	4	4.500	1,186K	3	3.559	1,239K	8	9.912	-	-	-	1,239K	8	9.912
2.2) OH VRLA Installation Tray (4)(†)	A		1,349K	1	1.349	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) HM008 - OHIO Class Main Storage Battery			**-**	**-**	***19.097***	**-**	**-**	***4.500***	**-**	**-**	***3.559***	**-**	**-**	***9.912***	**-**	**-**	**-**	**-**	**-**	***9.912***
3) HM009 - SEAWOLF Class Main Storage Battery																				
3.1) SW VRLA Battery Storage Boosting Packaging (5)(†)	A		610,000.00	1	0.610	723,333.33	3	2.170	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) HM009 - SEAWOLF Class Main Storage Battery			**-**	**-**	***0.610***	**-**	**-**	***2.170***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) HM010 - VIRGINIA Class Main Storage Battery																				
4.1) VA VRLA Battery Storage Boosting Packaging (6)(†)	A		679,500.00	18	12.231	756,000.00	2	1.512	801,900.00	9	7.217	834,000.00	7	5.838	-	-	-	834,000.00	7	5.838
4.2) VA VRLA Installation Tray (7)(†)	A		812,000.00	3	2.436	-	-	-	-	-	-	916,000.00	1	0.916	-	-	-	916,000.00	1	0.916
Subtotal: 4) HM010 - VIRGINIA Class Main Storage Battery			**-**	**-**	***14.667***	**-**	**-**	***1.512***	**-**	**-**	***7.217***	**-**	**-**	***6.754***	**-**	**-**	**-**	**-**	**-**	***6.754***
5) HM830 - Production Engineering / Test Equipment/ SUBEC / ABMS Tech Refresh																				
5.1) Production Engineering	A		-	-	81.470	-	-	9.358	-	-	10.301	-	-	9.949	-	-	-	-	-	9.949
5.2) Battery Installation Test Equipment/Fixtures	B		-	-	1.101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.3) Submarine Battery Evaluation Center (SUBBEC)	A		-	-	8.635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Aggregated Items Title: Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
5.4) Battery Monitoring Sys (ABMS /BCMS/ BMS)	A		-	-	6.021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) HM830 - Production Engineering / Test Equipment/ SUBEC / ABMS Tech Refresh			**-**	**-**	***97.227***	**-**	**-**	***9.358***	**-**	**-**	***10.301***	**-**	**-**	***9.949***	**-**	**-**	**-**	**-**	**-**	***9.949***
Total			**-**	**-**	**148.309**	**-**	**-**	**21.834**	**-**	**-**	**24.137**	**-**	**-**	**28.221**	**-**	**-**	**-**	**-**	**-**	**28.221**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(1) 1.1 VRLA battery unit costs reflect the costs in the existing commercial dual vendor contract. The actual costs vary by procurement FY, class type, vendor, procurement quantity, boosting intervals, packaging and storage duration. The Battery shipset prices are based on cell quantities and there is opportunity for price reductions per battery if purchased in bulk quantities.

(2) 1.2 Shipping/installation trays are discrete purchases on a separate line from the battery shipsets. Shipping/installation trays are required for battery installation and provide more protection and efficiency into battery shipset logistics.

(3) 2.1 Refer to footnote 1

(4) 2.2 Refer to footnote 2

(5) 3.1 Refer to footnote 1

(6) 4.1 Refer to footnote 1

(7) 4.2 Refer to footnote 2

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Aggregated Items: Equipment

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) HM002 - LOS ANGELES Class Main Storage Battery												
1.1) LA VRLA Battery Storage Boosting Packaging (1)		2020	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2020	Feb 2021	6	669,857.14	Y		
1.1) LA VRLA Battery Storage Boosting Packaging (1)		2021	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2021	Feb 2022	4	691,750.00	Y		
1.1) LA VRLA Battery Storage Boosting Packaging (1)		2022	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2022	Feb 2023	6	715,666.67	Y		
2) HM008 - OHIO Class Main Storage Battery												
2.1) OH VRLA Battery Storage Boosting Packaging (3)		2020	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2020	Feb 2021	5	1,047K	Y		
2.1) OH VRLA Battery Storage Boosting Packaging (3)		2021	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2021	Feb 2022	5	1,083K	Y		
2.1) OH VRLA Battery Storage Boosting Packaging (3)		2022	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2022	Feb 2023	4	1,125K	Y		
2.2) OH VRLA Installation Tray (4)		2021	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Apr 2021	Apr 2022	1	1,349K	Y		
3) HM009 - SEAWOLF Class Main Storage Battery												
3.1) SW VRLA Battery Storage Boosting Packaging (5)		2022	ENERSYS / Warrensburg, MO	C / IDIQ	NSWC CRANE	Feb 2022	Feb 2023	3	723,333.33	Y		
4) HM010 - VIRGINIA Class Main Storage Battery												
4.1) VA VRLA Battery Storage Boosting Packaging (6)		2020	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2020	Feb 2021	3	715,666.67	Y		
4.1) VA VRLA Battery Storage Boosting Packaging (6)		2021	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2021	Feb 2022	7	735,857.14	Y		
4.1) VA VRLA Battery Storage Boosting Packaging (6)		2022	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2022	Feb 2023	2	756,000.00	Y		
4.2) VA VRLA Installation Tray (7)		2021	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Apr 2021	Apr 2022	1	824,000.00	Y		

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	339.795	22.093	53.350	91.890	0.000	91.890	38.471	104.745	242.649	221.194	318.052	1,432.239
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	339.795	22.093	53.350	91.890	0.000	91.890	38.471	104.745	242.649	221.194	318.052	1,432.239
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**339.795**	**22.093**	**53.350**	**91.890**	**0.000**	**91.890**	**38.471**	**104.745**	**242.649**	**221.194**	**318.052**	**1,432.239**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget provides funding for the in service LPD 17 class program support equipment. Previous funding for LPD 17 class support equipment (FY12 and earlier) was provided under line item OPN 0981, Items Less Than $5 Million. Funding is required to upgrade mission critical electronics and Hull Mechanical & Engineering (HM&E) systems including the Engineering Control Systems (ECS), Ship Control Systems (SCS), Degaussing Systems, Shipboard Wide-Area Network (SWAN), commercial software products for ECS, SCS, Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) and Administrative Communications.

[P40A / CJ010 - Schoolhouse TTE]: CJ010 - SCHOOLHOUSE TTE
Funding for Schoolhouse Technical Training Equipment (TTE) is for the infrastructure and equipment to set up the schoolhouses for multiple systems such as ECS and SCS 60Hz and Ship Service Diesel Generators (SSDG). The schoolhouses will provide critical training to sailors in operation and maintenance of those systems.

[P40A / CJ020 - Shore Based Spares]: CJ020 SHORE BASED SPARES
Shore-Based Spares are critical long lead time items that are staged shore-side in the event of a catastrophic failure on an operational ship. These spares must be periodically replenished as assets are utilized. Furthermore, as the LPD 17 Class continues to introduce new ships (additional) to the fleet, the number of spare requirements increases as additional items are added to the spares list to support newer shipboard configurations.

[P40A / CJ080 Conjunctive HM&E AIT]: CJ080 CONJUNCTIVE HM&E ALTERATIONS
Conjunctive HM&E Alterations includes design integration, equipment procurement, recurring equipment engineering, equipment integration and Integrated Logistics Services (ILS).

[P40A / CJ081 - Navy Common Actuators]: Navy Common Actuator Development Program
Congressionally enacted requirement for Navy Common Actuator solution and supportability for the Class.

[P40A / Navy Common Actuators]: Congressionally enacted requirement for Navy Common Actuator solution and supportability for the Class.

[P40A / CJ035 - HM&E CONDITION SYSTEM]: CJ035 HULL, MECHANICAL AND ELECTRICAL CONDITION SYSTEM

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

This solution proposed would implement HM&E principles, it would implement a Defense-in-Depth Functional Implementation Architecture (DFIA) and meet the requirements of the standards released by the Information Assurance Technical Authority Board (IA TAB) across all the H,M&E systems deploying the ability to protect, detect, react, and restore in a contested environment. The HM&E Condition System will monitor the signals on the HM&E network, both between HM&E systems and also those coming from other functional domains.

[P40A / CJ090 - LPD17 Class Mid-life Modernization (ExMOD)]: CJ090 LPD 17 CLASS MID-LIFE MODERNIZATION
Conduct Mid-Life modernization on LPD 17 Class Ships in order to ensure they are ready, relevant, and capable of reaching their 40+ year Expected Service Life.

[P3A / CJ030 - HW/SW Obsolescence]: CJ030, CJ032 LPD 17 Hardware/Software HW/SW Obsolescence effort addresses critical hardware obsolescence and technology refreshment issues and supporting class upgrades focused on increased capability and reliability. Funding will support procurement of hardware and software changes to the systems listed:
-Command Information Display System (CIDS) 23TV, Replace projectors with Light Emitting Diode (LED) Projectors
-Engineering Control Systems (ECS) - Windows 10 upgrades
-Ship Control Systems (SCS) - Windows 10 upgrades/SCS Tech Refresh, Digital Rudder Angle Display Information System (DRADIS)
-Fire Detection System Upgrade Phase 1
-Wire-free Portable Communication System (WPCS) - Uninterrupted Power Supply (UPS) Upgrade, Low Power Amplifier Upgrade, Main Site Upgrade.
-27TV - 28TV System Upgrade
-Integrated Voice Communication System (IVCS) - IVCS system upgrades (local cutout switches, AFT lookout communication mod, obsolete terminal replacement, FWD/AFT Keyswitched Integrated Terminal Equipment (KITE)), Software version 7.2.2
-1MC Announcing System - Digital Microphone Control Station
-Damage Control Action Management System (DCAMS) - Upgrade to Advanced Damage Control System (ADCS)

[P3A - 2 / CJ040 HM&E Electrical Modifications]: CJ040 HM&E ELECTRICAL MODIFICATIONS HM&E Modernization funding is provided to correct mission, safety and reliability issues on electrical systems and ultimately resolve maintenance intensive system concerns. HM&E Electrical Modifications include:
SWAN UPS- Space Based UPS Reduction

[P3A - 3 / CJ050 - HM&E Survivability Modifications]: CJ050 HM&E SURVIVABILITY MODIFICATIONS HM&E Modernization funding is provided to correct mission, safety and reliability issues on HM&E systems (impacting ship survivability) and ultimately resolve maintenance intensive system concerns. HM&E Survivability Modifications include:
-Composite Ventilation Louvers and Screens.

[P3A - 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications]: CJ060, CJ061, CJ062, CJ063 HM&E MECHANICAL/AUXILIARY MODIFICATIONS HM&E Modernization funding is provided to correct mission, safety and reliability issues on mechanical and auxiliary systems and ultimately resolve maintenance intensive system concerns. HM&E Mechanical/ Auxiliary Modifications include:
-MIDE Bulkhead Shaft Seal
-Helo Hangar Door Control Modifications
-2nd Pass Reverse Osmosis (RO) Unit Upgrade, RO Unit Potable Water Electrolytic Disinfectant Generator (EDG) Recirculation Capability
-Aviation Maintenance Bridge Crane Replacement
-Knuckleboom Crane Improvements
-Scullery Improvements
-Branch Piping Modifications
-Titanium valve replacement
-Common Fuel Rail upgrades

[P3A - 5 / CJ070 SWAN-CANES Integration]: CJ070 SWAN-CANES Integration

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

The results of the Shipboard Wide Area Network (SWAN) / Consolidated Afloat Networks and Enterprise Services (CANES) study directed the replacement of the C4I capability of the LPD 17 Class SWAN with CANES and the conversion of the non-C4I SWAN into a new HM&E Network (mini SWAN). SWAN funding is required to field the new HM&E Network in support of the CANES installation. In addition, funding is required to sustain the legacy SWAN, while the LPD 17 Class ships await the CANES/HM&E Network back fit installation. SWAN serves as the backbone of the LPD 17 class and funding is necessary to address obsolescence, reliability issues, performance concerns, emergent Fleet requirements including enabling Cryptologic Log On (CLO), removing unsupported software, replacing aging obsolete network hardware (e.g., servers and core switches), and maintaining the Information Assurance posture of the Common Operating Environment (COE). This funding is vital to ensure the LPD 17 Class ships can combat the evolving cyber threat.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0946 / LPD Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	LPD Class Support Equipment				- / 54.034	- / 7.876	- / 8.569	- / 31.915	- / -	- / 31.915
P-3a	1 / CJ030 - HW/SW Obsolescence (TBD)				- / 55.628	- / 1.520	- / 4.433	- / 10.205	- / 0.000	- / 10.205
P-3a	2 / CJ040 HM&E Electrical Modifications (TBD)				- / 23.646	- / 2.551	- / 2.015	- / 2.856	- / 0.000	- / 2.856
P-3a	3 / CJ050 - HM&E Survivability Modifications (TBD)				- / 5.375	- / 0.000	- / 0.486	- / 1.589	- / 0.000	- / 1.589
P-3a	4 / CJ060 - HM&E Mechanical/Auxiliary Modifications (TBD)				- / 84.813	- / 0.895	- / 2.283	- / 6.806	- / 0.000	- / 6.806
P-3a	5 / CJ070 SWAN-CANES Integration (TBD)				- / 79.320	- / 4.619	- / 1.781	- / 9.589	- / 0.000	- / 9.589
P-3a	6 / CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades (TBD)				- / 2.725	- / 0.669	- / 10.792	- / 4.342	- / 0.000	- / 4.342
P-3a	7 / CJ061 Titanium Valve Replacement (TBD)				- / 19.591	- / 3.963	- / 7.213	- / 4.119	- / 0.000	- / 4.119
P-3a	8 / CJ062 HM&E Mechanical/Auxiliary Mods Knuckleboom Crane Improvements (TBD)				- / 7.125	- / 0.000	- / 0.696	- / 1.321	- / 0.000	- / 1.321
P-3a	9 / CJ063 HM&E Mechanical/Auxiliary Mod Common Fuel Rail (TBD)				- / 7.538	- / 0.000	- / 15.082	- / 19.148	- / 0.000	- / 19.148
P-40	**Total Gross/Weapon System Cost**				**- / 339.795**	**- / 22.093**	**- / 53.350**	**- / 91.890**	**- / 0.000**	**- / 91.890**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	LPD Class Support Equipment				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / CJ030 - HW/SW Obsolescence (TBD)				- / 5.671	- / 0.656	- / 2.134	- / 5.779	- / 4.424	- / 90.450
P-3a	2 / CJ040 HM&E Electrical Modifications (TBD)				- / 1.431	- / 0.000	- / 2.171	- / 1.561	- / 0.000	- / 36.231
P-3a	3 / CJ050 - HM&E Survivability Modifications (TBD)				- / 1.669	- / 0.273	- / 2.607	- / 4.046	- / 0.000	- / 16.045
P-3a	4 / CJ060 - HM&E Mechanical/Auxiliary Modifications (TBD)				- / 0.386	- / 0.404	- / 2.263	- / 3.400	- / 1.924	- / 103.174
P-3a	5 / CJ070 SWAN-CANES Integration (TBD)				- / 4.856	- / 0.000	- / 0.540	- / 3.469	- / 0.000	- / 104.174
P-3a	6 / CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades (TBD)				- / 1.618	- / 3.519	- / 8.468	- / 4.031	- / 8.369	- / 44.533
P-3a	7 / CJ061 Titanium Valve Replacement (TBD)				- / 1.736	- / 4.550	- / 0.300	- / 1.722	- / 0.000	- / 43.194
P-3a	8 / CJ062 HM&E Mechanical/Auxiliary Mods Knuckleboom Crane Improvements (TBD)				- / 0.000	- / 0.737	- / 2.377	- / 3.018	- / 1.673	- / 16.947
P-3a	9 / CJ063 HM&E Mechanical/Auxiliary Mod Common Fuel Rail (TBD)				- / 15.293	- / 31.050	- / 12.745	- / 11.547	- / 41.451	- / 153.854
P-40	**Total Gross/Weapon System Cost**				**- / 38.471**	**- / 104.745**	**- / 242.649**	**- / 221.194**	**- / 318.052**	**- / 1,432.239**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Increase in costs of $38.540 from FY23 to FY24 due to the following:

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

In FY24, there are additional larger CNO availabilities. LPD20 will be back home stateside receiving a major overhaul as the Program was not able to complete major modernization over the past 10 years when she was OCONUS. LPD19 also will have a large avail package increasing the requirement need from FY23 to FY24. FY24 is also the first year of CJ090 ExMOD NRE requirements in support of first Midlife availability package in FY28.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Aggregated Items Title:** LPD Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) CJ010 - Schoolhouse TTE																				
1.1) Schoolhouse TTE	A		-	-	1.200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) CJ010 - Schoolhouse TTE			**-**	**-**	***1.200***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) CJ020 - Shore Based Spares																				
2.1) Shore Based Spares [1]	A		-	-	20.555	-	-	4.391	-	-	2.193	-	-	5.238	-	-	-	-	-	5.238
Subtotal: 2) CJ020 - Shore Based Spares			**-**	**-**	***20.555***	**-**	**-**	***4.391***	**-**	**-**	***2.193***	**-**	**-**	***5.238***	**-**	**-**	**-**	**-**	**-**	***5.238***
3) CJ080 Conjunctive HM&E AIT [2]																				
3.1) Conjunctive HM&E Alterations	A		-	-	25.647	-	-	0.609	-	-	1.371	-	-	4.817	-	-	-	-	-	4.817
Subtotal: 3) CJ080 Conjunctive HM&E AIT			**-**	**-**	***25.647***	**-**	**-**	***0.609***	**-**	**-**	***1.371***	**-**	**-**	***4.817***	**-**	**-**	**-**	**-**	**-**	***4.817***
4) CJ081 - Navy Common Actuators																				
4.1) Navy Common Actuators	A		-	-	5.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) CJ081 - Navy Common Actuators			**-**	**-**	***5.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) CJ035 - HM&E CONDITION SYSTEM																				
5.1) HM&E CONDITION SYSTEM [3]	A		-	-	1.632	-	-	2.876	-	-	5.005	-	-	5.235	-	-	-	-	-	5.235
Subtotal: 5) CJ035 - HM&E CONDITION SYSTEM			**-**	**-**	***1.632***	**-**	**-**	***2.876***	**-**	**-**	***5.005***	**-**	**-**	***5.235***	**-**	**-**	**-**	**-**	**-**	***5.235***
6) CJ090 - LPD17 Class Mid-life Modernization (ExMOD)																				
6.1) CJ090 - LPD17 Class Mid-life Modernization (ExMOD) [4]	A		-	-	-	-	-	-	-	-	-	-	-	16.625	-	-	-	-	-	16.625
Subtotal: 6) CJ090 - LPD17 Class Mid-life Modernization (ExMOD)			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***16.625***	**-**	**-**	**-**	**-**	**-**	***16.625***
Total			**-**	**-**	**54.034**	**-**	**-**	**7.876**	**-**	**-**	**8.569**	**-**	**-**	**31.915**	**-**	**-**	**-**	**-**	**-**	**31.915**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

[1] CJ020 Shore Based Spares. Funds remaining are added to this line after requirements tied to CNO Availabilities are fully funded. Remaining funding amount applied to this line may vary depending on the funding amounts needed to support program requirements. The program has a running list of 340+ line items in support of spare needs. Priorities of procurements are determined based on funding available and timeline urgency. Increase from FY23 to FY24 ($3.133) is due to increased spares requirements based on operational demand.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Aggregated Items Title:** LPD Class Support Equipment

(2) CJ080: Conjunctive HM&E Alterations includes design integration, equipment procurement, recurring equipment engineering, equipment integration and Integrated Logistics Services (ILS). In FY24, there are additional larger CNO availabilities justifying the need for additional conjunctive integration on LPD20. LPD20 will be back home stateside receiving a major overhaul as the Program was not able to complete major modernization over the past 10 years when she was OCONUS.

(3) CJ035: HM&E Condition System alterations include equipment procurement, software configuration and quality assurance, recurring equipment engineering, equipment integration and Integrated Logistics Services (ILS). An increase from (2) CNO Availabilities in FY23 to (4) CNO Availabilities in FY24 results in an increase of alteration installations, which increases costs to $5.235M. FY23 alteration installations supported are for LPD 27 and LPD 24. FY24 alteration installations supported are for LPD 19, LPD 24, LPD 21, and LPD 25.

(4) CJ090- LPD 17 CLASS MID-LIFE MODERNIZATION (ExMOD). ExMOD requirements for LPD's MIDLIFE. FY24 is the first year of CJ090 ExMOD NRE requirements in support of first Midlife availability package in FY28.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 1 / CJ030 - HW/SW Obsolescence
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	55.628	1.520	4.433	10.205	0.000	10.205	5.671	0.656	2.134	5.779	4.424	90.450
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	55.628	1.520	4.433	10.205	0.000	10.205	5.671	0.656	2.134	5.779	4.424	90.450
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**55.628**	**1.520**	**4.433**	**10.205**	**0.000**	**10.205**	**5.671**	**0.656**	**2.134**	**5.779**	**4.424**	**90.450**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

HW/SW Obsolescence (CJ030) includes funding for procurement and installation of equipment to correct critical obsolescence issues on LPD17 Class mission systems. Resolves operational and obsolescence issues. Replaces current split controllers, resolves rack cooling, modifies loud speaker cable plant, and provides commonality and system architecture and hardware.

[HW/SW Obsolescence] HW/SW Obsolescence effort addresses hardware obsolescence/technology refreshment issues, and class upgrades focused on increased capabilities, force protection, and safety. Funding will support procurement of hardware and software changes to the systems listed:
-Command Information Display System (CIDS) 23TV - HW refresh and upgrade to Windows 10
-Ship Control Systems (SCS) - Windows 10 upgrade/SCS Tech Refresh, Digital Rudder Angle Display Information System (DRADIS)
-Fire Detection System Upgrade Phase 1
-Wire-free Portable Communication System (WPCS) - Uninterruptible Power Supply (UPS) Upgrade, Low Power Amplifier Upgrade
-27TV - 28TV Low Channel Pier Cable Blockage improvement
-Integrated Voice Communication System (IVCS)- IVCS system upgrades (local cutout switches, AFT lookout communication mod, obsolete terminal replacement, FWD/AFT KITE), Software version 7.2.2.
-1MC Announcing System - Digital Microphone Control Station 1MC improvements
-Damage Control Action Management Software (DCAMS) - Upgrade to Advanced Damage Control System (ADCS)

Shipsets of equipment vary in quantities and types of components each fiscal year and within fiscal years. Each ship requires a different number of alterations to be installed, and alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single Chief of Naval Operations (CNO) Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized. DSA costs will also vary by kit due to differences in scope and complexity, and first installation compared to follow-on installations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 1 / CJ030 - HW/SW Obsolescence
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: HW/SW Obsolescence	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CJ030 - HW/SW Obsolescence												
B Kits												
Recurring												
1.1.1) HW/SW Obsolescence - NonOrganic (5)	117 / 25.870	- / -	2 / 0.716	4 / 1.215	- / -	4 / 1.215	1 / 0.375	- / -	6 / 1.742	- / -	- / -	130 / 29.918
Subtotal: Recurring	*- / 25.870*	*- / -*	*- / 0.716*	*- / 1.215*	*- / -*	*- / 1.215*	*- / 0.375*	*- / -*	*- / 1.742*	*- / -*	*- / 0.000*	*- / 29.918*
Subtotal: CJ030 - HW/SW Obsolescence	*117 / 25.870*	*- / -*	*2 / 0.716*	*4 / 1.215*	*- / -*	*4 / 1.215*	*1 / 0.375*	*- / -*	*6 / 1.742*	*- / -*	*- / -*	*130 / 29.918*
Subtotal: Procurement, All Modification Items	*- / 25.870*	*- / -*	*- / 0.716*	*- / 1.215*	*- / -*	*- / 1.215*	*- / 0.375*	*- / -*	*- / 1.742*	*- / -*	*- / 0.000*	*- / 29.918*
Support *(All Modification Items)*												
2.1) Non-Recurring Engineering	- / 0.330	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.330
Subtotal: Support	*- / 0.330*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.330*
Installation												
Modification Item 1 of 1: CJ030 - HW/SW Obsolescence	- / 29.428	- / 1.520	- / 3.717	- / 8.990	- / 0.000	- / 8.990	- / 5.296	- / 0.656	- / 0.392	- / 5.779	- / 4.424	- / 60.202
Subtotal: Installation	*- / 29.428*	*- / 1.520*	*- / 3.717*	*- / 8.990*	*- / -*	*- / 8.990*	*- / 5.296*	*- / 0.656*	*- / 0.392*	*- / 5.779*	*- / 4.424*	*- / 60.202*
Total												
Total Cost (Procurement + Support + Installation)	**55.628**	**1.520**	**4.433**	**10.205**	**0.000**	**10.205**	**5.671**	**0.656**	**2.134**	**5.779**	**4.424**	**90.450**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 1 / CJ030 - HW/SW Obsolescence
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: CJ030 - HW/SW Obsolescence

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Jan 2023	Dec 2024	Nov 2025		Nov 2027	
Delivery Dates	Dec 2022	Jan 2024	Dec 2025	Nov 2026		Nov 2028	

Installation Information

Method of Implementation: AIT:: Installation Name: HW/SW Obsolescence

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	100 / 29.428	4 / 1.520	8 / 2.750	3 / 1.215	0 / 0.000	3 / 1.215	1 / 0.122	- / -	- / -	- / -	0 / 0.000	116 / 35.035
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.967	2 / 7.491	0 / 0.000	2 / 7.491	- / -	- / -	- / -	- / -	0 / 0.000	2 / 8.458
FY 2024	- / -	- / -	- / -	0 / 0.284	0 / 0.000	0 / 0.284	4 / 5.161	- / -	- / -	- / -	0 / 0.000	4 / 5.445
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.013	1 / 0.656	- / -	- / -	0 / 0.000	1 / 0.669
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.392	6 / 5.779	0 / 4.424	6 / 10.595
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	100 / 29.428	4 / 1.520	8 / 3.717	5 / 8.990	0 / 0.000	5 / 8.990	5 / 5.296	1 / 0.656	0 / 0.392	6 / 5.779	0 / 4.424	129 / 60.202

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	100	2	-	-	2	2	3	3	-	1	3	-	1	2	-	3	-	-	-	1	-	-	-	-	-	4	-	-	2	-	129
Out	97	3	-	1	-	-	4	-	2	3	-	3	-	2	-	1	1	-	2	-	2	-	1	-	-	1	-	-	-	6	129

Footnotes:

(5) HW/SW Obsolescence requirements are subject to changes in CNO ship availability schedule. During FY2022: (2) FY19 installations were deferred to FY22 due to changes in CNO Availability for LPD24 and (2) FY21 kit procurements will install on LPD 23. During FY2023: (8) FY19 procurements initially planned for installation in FY20 were deferred to FY23 to be installed on LPD 17 (2 kits), LPD 18 (3 kits), LPD 25 (1 kit), and LPD 26 (2 kits) due to CNO Availability changes. During FY2024: (4) kits will be procured for installations on FY25 CNO Availabilities for LPD 27 (3 kits) and LPD 17 (1 kit). Additionally, in FY24, (2) FY23 kit procurements are scheduled for installation on LPD 19 (1 kit), and LPD 20 (1 kit). Also, (3) FY20 kits will be installed on LPD 19, in FY24 due to CNO availability changes that occurred in FY22.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 2 / CJ040 HM&E Electrical Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	23.646	2.551	2.015	2.856	0.000	2.856	1.431	0.000	2.171	1.561	0.000	36.231
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	23.646	2.551	2.015	2.856	0.000	2.856	1.431	0.000	2.171	1.561	0.000	36.231
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**23.646**	**2.551**	**2.015**	**2.856**	**0.000**	**2.856**	**1.431**	**0.000**	**2.171**	**1.561**	**0.000**	**36.231**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

HM&E Modernization funding is provided to correct mission, safety and reliability issues on electrical systems and ultimately resolve maintenance intensive system concerns. HM&E Electrical Modifications include:
SWAN UPS - Space Based Uninterruptable Power Supply (UPS) Reduction.

The installation fielding plan for this cost code has been adjusted to align with Consolidated Afloat Networks and Enterprise Services (CANES) installations aboard LPD 17 Class ships. This alignment has been completed to reduce the operational burden on ship's force, and reduce re-work during CANES installations.

[HM&E Electrical Upgrades] Shipsets of equipment vary in quantities and types of components each fiscal year and within fiscal years. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single CNO Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized. DSA costs will also vary by kit due to differences in scope and complexity, and first installation compared to follow-on installations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 2 / CJ040 HM&E Electrical Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: HM&E Electrical Modifications	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CJ040 HM&E Electrical Modifications												
B Kits												
Recurring												
1.1.1) HM&E Electrical Upgrades - NonOrganic (6)	9 / 11.585	- / -	1 / 1.389	- / -	- / -	- / -	- / -	- / -	1 / 1.496	- / -	- / -	11 / 14.470
Subtotal: Recurring	*- / 11.585*	*- / -*	*- / 1.389*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.496*	*- / -*	*- / 0.000*	*- / 14.470*
Subtotal: CJ040 HM&E Electrical Modifications	*9 / 11.585*	*- / -*	*1 / 1.389*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 1.496*	*- / -*	*- / -*	*11 / 14.470*
Subtotal: Procurement, All Modification Items	*- / 11.585*	*- / -*	*- / 1.389*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.496*	*- / -*	*- / 0.000*	*- / 14.470*
Installation												
Modification Item 1 of 1: CJ040 HM&E Electrical Modifications	- / 12.061	- / 2.551	- / 0.626	- / 2.856	- / 0.000	- / 2.856	- / 1.431	- / 0.000	- / 0.675	- / 1.561	- / 0.000	- / 21.761
Subtotal: Installation	*- / 12.061*	*- / 2.551*	*- / 0.626*	*- / 2.856*	*- / -*	*- / 2.856*	*- / 1.431*	*- / -*	*- / 0.675*	*- / 1.561*	*- / 0.000*	*- / 21.761*
Total												
Total Cost (Procurement + Support + Installation)	**23.646**	**2.551**	**2.015**	**2.856**	**0.000**	**2.856**	**1.431**	**0.000**	**2.171**	**1.561**	**0.000**	**36.231**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 2 / CJ040 HM&E Electrical Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: CJ040 HM&E Electrical Modifications

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Mar 2022	Dec 2022				Nov 2026	
Delivery Dates	Mar 2023	Dec 2023				Nov 2027	

Installation Information

Method of Implementation: AIT:: Installation Name: HM&E Electrical Upgrades

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	6 / 12.061	1 / 2.551	- / -	1 / 1.537	0 / 0.000	1 / 1.537	1 / 1.431	- / -	- / -	- / -	0 / 0.000	9 / 17.580
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.626	1 / 1.319	0 / 0.000	1 / 1.319	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.945
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.675	1 / 1.561	0 / 0.000	1 / 2.236
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 12.061	1 / 2.551	0 / 0.626	2 / 2.856	0 / 0.000	2 / 2.856	1 / 1.431	- / -	0 / 0.675	1 / 1.561	0 / 0.000	11 / 21.761

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	6	1	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	11
Out	4	1	-	1	-	-	1	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	1	11

Footnotes:

(6) HM&E Electrical Modification requirements are subject to changes in the CNO ship availability schedule. During FY2022: (0) kits were planned for procurement in FY22. (1) FY19 kit previously planned for FY22 on LPD 21 has been deferred to FY25 due to a change in the CNO Availability schedule. During FY2023: (1) kit is being procured in FY23 and there are no planned installations. During FY2024: (0) kits are planned for procurement and (1) prior year kit will install on LPD 19 and (1) FY23 kit will install FY24 CNO Availability on LPD 20.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 3 / CJ050 - HM&E Survivability Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	5.375	0.000	0.486	1.589	0.000	1.589	1.669	0.273	2.607	4.046	0.000	16.045
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	5.375	0.000	0.486	1.589	0.000	1.589	1.669	0.273	2.607	4.046	0.000	16.045
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**5.375**	**0.000**	**0.486**	**1.589**	**0.000**	**1.589**	**1.669**	**0.273**	**2.607**	**4.046**	**0.000**	**16.045**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

CJ050 HM&E SURVIVABILITY MODIFICATIONS HM&E Modernization funding is provided to correct mission, safety and reliability issues on HM&E systems (impacting ship survivability) and ultimately resolve maintenance intensive system concerns. HM&E Survivability Modifications include:
-Composite Ventilation Louvers and Screens.

[HM&E Survivability Modifications] Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single CNO Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized, and the actual requirement varies in different louver & screen sizes by increment. Each kit is of a different size and zone increment so they cannot be compared against other kits. DSA costs will also vary by kit due to differences in scope and complexity, and first installation compared to follow-on installations. CONUS ship alterations should be executed during the average installation availability timeframe of 45 days. However, OCONUS ships require 100+ days to complete installation

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 3 / CJ050 - HM&E Survivability Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: HM&E Survivability Modifications	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CJ050 - HM&E Survivability Modifications												
B Kits												
Recurring												
1.1.1) HM&E Survivability Modifications - NonOrganic (7)	11 / 3.391	- / -	1 / 0.398	2 / 0.197	- / -	2 / 0.197	- / -	2 / 0.208	6 / 0.627	- / -	- / -	22 / 4.821
Subtotal: Recurring	*- / 3.391*	*- / -*	*- / 0.398*	*- / 0.197*	*- / -*	*- / 0.197*	*- / -*	*- / 0.208*	*- / 0.627*	*- / -*	*- / 0.000*	*- / 4.821*
Subtotal: CJ050 - HM&E Survivability Modifications	*11 / 3.391*	*- / -*	*1 / 0.398*	*2 / 0.197*	*- / -*	*2 / 0.197*	*- / -*	*2 / 0.208*	*6 / 0.627*	*- / -*	*- / -*	*22 / 4.821*
Subtotal: Procurement, All Modification Items	*- / 3.391*	*- / -*	*- / 0.398*	*- / 0.197*	*- / -*	*- / 0.197*	*- / -*	*- / 0.208*	*- / 0.627*	*- / -*	*- / 0.000*	*- / 4.821*
Installation												
Modification Item 1 of 1: CJ050 - HM&E Survivability Modifications	- / 1.984	- / 0.000	- / 0.088	- / 1.392	- / 0.000	- / 1.392	- / 1.669	- / 0.065	- / 1.980	- / 4.046	- / 0.000	- / 11.224
Subtotal: Installation	*- / 1.984*	*- / -*	*- / 0.088*	*- / 1.392*	*- / -*	*- / 1.392*	*- / 1.669*	*- / 0.065*	*- / 1.980*	*- / 4.046*	*- / 0.000*	*- / 11.224*
Total												
Total Cost (Procurement + Support + Installation)	**5.375**	**0.000**	**0.486**	**1.589**	**0.000**	**1.589**	**1.669**	**0.273**	**2.607**	**4.046**	**0.000**	**16.045**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 3 / CJ050 - HM&E Survivability Modifications

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CJ050 - HM&E Survivability Modifications

Manufacturer Information

Manufacturer Name: VARIOUS | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Jan 2023	May 2024		Jun 2026	Nov 2026	
Delivery Dates		Jan 2024	May 2025		Jun 2027	Nov 2027	

Installation Information

Method of Implementation: AIT:: Installation Name: HM&E Survivability Modifications

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	9 / 1.984	1 / 0.000	- / -	1 / 0.806	0 / 0.000	1 / 0.806	- / -	- / -	- / -	- / -	0 / 0.000	11 / 2.790
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.088	1 / 0.524	0 / 0.000	1 / 0.524	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.612
FY 2024	- / -	- / -	- / -	0 / 0.062	0 / 0.000	0 / 0.062	2 / 1.669	- / -	- / -	- / -	0 / 0.000	2 / 1.731
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.065	2 / 1.782	- / -	0 / 0.000	2 / 1.847
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.198	6 / 4.046	0 / 0.000	6 / 4.244
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	9 / 1.984	1 / 0.000	0 / 0.088	2 / 1.392	0 / 0.000	2 / 1.392	2 / 1.669	0 / 0.065	2 / 1.980	6 / 4.046	0 / 0.000	22 / 11.224

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	9	-	1	-	-	-	-	-	-	1	1	-	-	-	-	2	-	-	-	-	-	-	-	-	2	6	-	-	-	-	22
Out	8	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	2	-	-	-	-	-	-	8	22

Footnotes:

(7) HM&E Survivability Modifications requirements are subject to changes in the CNO ship availability schedule. During FY2022: (0) kits were planned for procurement and (1) FY21 procurement was deferred to a future year due to change in CNO availabilities. During FY2023: (1) kit is planned for procurement and (0) Installations are planned. During FY2024: (2) kits will be procured for installation during LPD 17 FY25 CNO availability. Also, (1) FY20 Procurement will be installed on LPD 19 and (1) FY23 procurement will be installed on LPD 20.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	84.813	0.895	2.283	6.806	0.000	6.806	0.386	0.404	2.263	3.400	1.924	103.174
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	84.813	0.895	2.283	6.806	0.000	6.806	0.386	0.404	2.263	3.400	1.924	103.174
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**84.813**	**0.895**	**2.283**	**6.806**	**0.000**	**6.806**	**0.386**	**0.404**	**2.263**	**3.400**	**1.924**	**103.174**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

HM&E Mechanical/Auxiliary Modifications (CJ060) includes funding for procurement and installation of equipment to support upgrades of shipboard mechanical/auxiliary systems to a more sustainable, reliable configuration on LPD17 Class ships. Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single CNO Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized.

HM&E Mechanical/Auxiliary Modifications include:
-MIDE Bulkhead Shaft Seal
-Helo Hangar Door Control Modifications
-2nd Pass Reverse Osmosis (RO) Unit Upgrade, RO Unit Potable Water Electrolytic Disinfectant Generator (EDG) Recirculation Capability
-Aviation Maintenance Bridge Crane Replacement
-Scullery Improvements
-Branch Piping Modifications

[CJ060 HM&E Mechanical/Auxiliary Modifications] Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single CNO Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized. DSA costs will also vary by kit due to differences in scope and complexity, and first installation compared to follow-on installations. The program production lead times have increased from 12 months to 15 months based on actual procurement buys to date.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: HM&E Mechanical/ Auxiliary Modifications	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CJ060 - HM&E Mechanical/ Auxiliary Modifications												
B Kits												
Recurring												
1.1.1) CJ060 HM&E Mechanical/Auxiliary Modifications - NonOrganic [8]	70 / 46.441	- / -	9 / 1.550	- / -	- / -	- / -	- / -	1 / 0.204	5 / 1.154	1 / 0.211	1 / 0.243	87 / 49.803
Subtotal: Recurring	*- / 46.441*	*- / -*	*- / 1.550*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.204*	*- / 1.154*	*- / 0.211*	*- / 0.243*	*- / 49.803*
Subtotal: CJ060 - HM&E Mechanical/Auxiliary Modifications	*70 / 46.441*	*- / -*	*9 / 1.550*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 0.204*	*5 / 1.154*	*1 / 0.211*	*1 / 0.243*	*87 / 49.803*
Subtotal: Procurement, All Modification Items	*- / 46.441*	*- / -*	*- / 1.550*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.204*	*- / 1.154*	*- / 0.211*	*- / 0.243*	*- / 49.803*
Support *(All Modification Items)*												
2.1) Non-Recurring Engineering	- / 2.667	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.667
Subtotal: Support	*- / 2.667*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.667*
Installation												
Modification Item 1 of 1: CJ060 - HM&E Mechanical/ Auxiliary Modifications	- / 35.705	- / 0.895	- / 0.733	- / 6.806	- / 0.000	- / 6.806	- / 0.386	- / 0.200	- / 1.109	- / 3.189	- / 1.681	- / 50.704
Subtotal: Installation	*- / 35.705*	*- / 0.895*	*- / 0.733*	*- / 6.806*	*- / -*	*- / 6.806*	*- / 0.386*	*- / 0.200*	*- / 1.109*	*- / 3.189*	*- / 1.681*	*- / 50.704*
Total												
Total Cost (Procurement + Support + Installation)	**84.813**	**0.895**	**2.283**	**6.806**	**0.000**	**6.806**	**0.386**	**0.404**	**2.263**	**3.400**	**1.924**	**103.174**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CJ060 - HM&E Mechanical/Auxiliary Modifications

Manufacturer Information

Manufacturer Name: Various | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Dec 2023				Nov 2026	
Delivery Dates		Dec 2024				Nov 2027	

Installation Information

Method of Implementation: [none specified]:: Installation Name: CJ060 HM&E Mechanical/Auxiliary Modifications

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	61 / 35.705	3 / 0.895	- / -	5 / 2.790	0 / 0.000	5 / 2.790	1 / 0.386	- / -	- / -	- / -	0 / 0.000	70 / 39.776
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.733	9 / 4.016	0 / 0.000	9 / 4.016	- / -	- / -	- / -	- / -	0 / 0.000	9 / 4.749
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.200	1 / 0.512	- / -	0 / 0.000	1 / 0.712
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.597	5 / 2.982	0 / 0.000	5 / 3.579
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.207	1 / 0.451	1 / 0.658
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.230	1 / 1.230
Total	61 / 35.705	3 / 0.895	0 / 0.733	14 / 6.806	0 / 0.000	14 / 6.806	1 / 0.386	0 / 0.200	1 / 1.109	5 / 3.189	2 / 1.681	87 / 50.704

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	61	2	-	1	-	-	-	-	-	12	1	-	1	1	-	-	-	-	-	-	-	1	-	-	-	4	-	-	1	2	87
Out	55	4	-	2	-	-	2	1	-	-	-	-	-	5	1	7	1	-	-	1	-	-	-	-	-	1	-	-	-	7	87

Footnotes:

(8) HM&E Mechanical/Auxiliary Modifications requirements are subject to changes in the CNO ship availability schedule. During FY2022: (0) kits were planned for procurement. FY22 installations include: (2) FY16 procurements planned to be installed on LPD 17 (1 kit) and LPD 20 (1 kit), as well as (1) FY21 procurement installed on LPD 23. During FY2023: (9) kits are planned for procurement and (0) Installations

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

are planned. During FY2024: (0) kits are planned for procurement in FY24. FY24 planned installations include: (5) kits procured in FY20 will be installed on LPD 19 in FY24 due to CNO availability changes and (9) kits procured in FY23 are planned for installations on LPD 20 (8 kits) and LPD 25 (1 kit).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 5 / CJ070 SWAN-CANES Integration
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	79.320	4.619	1.781	9.589	0.000	9.589	4.856	0.000	0.540	3.469	0.000	104.174
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	79.320	4.619	1.781	9.589	0.000	9.589	4.856	0.000	0.540	3.469	0.000	104.174
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**79.320**	**4.619**	**1.781**	**9.589**	**0.000**	**9.589**	**4.856**	**0.000**	**0.540**	**3.469**	**0.000**	**104.174**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

CJ070 SWAN-CANES Integration

The results of the Shipboard Wide Area Network (SWAN) / Consolidated Afloat Networks and Enterprise Services (CANES) study directed the replacement of the C4I capability of the LPD 17 Class SWAN with CANES and the conversion of the non-C4I SWAN into a new HM&E Network (mini SWAN). SWAN funding is required to field the new HM&E Network in support of the CANES installation. In addition, funding is required to sustain the legacy SWAN, while the LPD 17 Class ships await the CANES/HM&E Network back fit installation. SWAN serves as the backbone of the LPD 17 class and funding is necessary to address obsolescence, reliability issues, performance concerns, emergent Fleet requirements including enabling Cryptologic Log On (CLO), removing unsupported software, replacing aging obsolete network hardware (e.g., servers and core switches), and maintaining the Information Assurance posture of the Common Operating Environment (COE). This funding is vital to ensure the LPD 17 Class ships can combat the evolving cyber threat.

[SWAN-CANES Integration] This mod has sharp fluctuations in procurement and installation unit cost due to the variations in equipment quantities and types of components that make up a shipset. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. Due to Type Commander (TYCOM) Integrated Class Maintenance Plan (ICMP) scheduling adjustments, CNO availabilities for LPD 17 Class have increased from once every 2 years to once every 3 years. This has caused CANES and HM&E Network schedules to slip and SWAN sustainment modification quantities to increase.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 5 / CJ070 SWAN-CANES Integration
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: LPD 17 Class SWAN-CANES Integration	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CJ070 SWAN-CANES Integration												
B Kits												
Recurring												
1.1.1) SWAN-CANES Integration - NonOrganic (9)	119 / 36.395	- / -	2 / 1.471	- / -	- / -	- / -	- / -	- / -	1 / 0.366	- / -	- / -	122 / 38.232
Subtotal: Recurring	*- / 36.395*	*- / -*	*- / 1.471*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.366*	*- / -*	*- / 0.000*	*- / 38.232*
Non-Recurring												
1.2.1) SWAN-CANES Integration - Organic	- / 8.088	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.088
Subtotal: Non-Recurring	*- / 8.088*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.088*
Subtotal: CJ070 SWAN-CANES Integration	*119 / 44.483*	*- / -*	*2 / 1.471*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 0.366*	*- / -*	*- / -*	*122 / 46.320*
Subtotal: Procurement, All Modification Items	*- / 44.483*	*- / -*	*- / 1.471*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.366*	*- / -*	*- / 0.000*	*- / 46.320*
Installation												
Modification Item 1 of 1: CJ070 SWAN-CANES Integration	- / 34.837	- / 4.619	- / 0.310	- / 9.589	- / 0.000	- / 9.589	- / 4.856	- / 0.000	- / 0.174	- / 3.469	- / 0.000	- / 57.854
Subtotal: Installation	*- / 34.837*	*- / 4.619*	*- / 0.310*	*- / 9.589*	*- / -*	*- / 9.589*	*- / 4.856*	*- / -*	*- / 0.174*	*- / 3.469*	*- / 0.000*	*- / 57.854*
Total												
Total Cost (Procurement + Support + Installation)	**79.320**	**4.619**	**1.781**	**9.589**	**0.000**	**9.589**	**4.856**	**0.000**	**0.540**	**3.469**	**0.000**	**104.174**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 5 / CJ070 SWAN-CANES Integration
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: CJ070 SWAN-CANES Integration

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: San Diego, CA
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Dec 2022				Jun 2027	
Delivery Dates		Dec 2023				Jun 2028	

Installation Information

Method of Implementation: AIT:: Installation Name: SWAN-CANES Integration

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	112 / 34.837	3 / 4.619	- / -	2 / 4.915	0 / 0.000	2 / 4.915	2 / 4.856	- / -	- / -	- / -	0 / 0.000	119 / 49.227
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.310	2 / 4.674	0 / 0.000	2 / 4.674	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.984
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.174	1 / 3.469	0 / 0.000	1 / 3.643
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	112 / 34.837	3 / 4.619	0 / 0.310	4 / 9.589	0 / 0.000	4 / 9.589	2 / 4.856	- / -	0 / 0.174	1 / 3.469	0 / 0.000	122 / 57.854

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	112	2	-	1	-	-	-	-	-	4	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	122
Out	107	-	-	-	5	-	3	-	-	-	-	-	-	-	-	4	-	-	2	-	-	-	-	-	-	-	-	-	-	1	122

Footnotes:

(9) SWAN-CANES Integration requirements are subject to changes in the CNO ship availability schedule. During FY2022: (0) kits were planned for procurement and FY22 planned installations include: (1) kit procured in FY20 to be installed on LPD 22 and (2) kits procured in FY21 to be installed on LPD 27. During FY2023: (2) kits are planned for procurement and there are (0) FY23 planned installations. During FY2024: (0) kits are planned for procurement in FY24 and planned installations include (2) kits procured in FY18 to be installed on LPD 19 and (2) kits procured in FY23 to be installed on LPD 20.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 6 / CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2.725	0.669	10.792	4.342	0.000	4.342	1.618	3.519	8.468	4.031	8.369	44.533
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2.725	0.669	10.792	4.342	0.000	4.342	1.618	3.519	8.468	4.031	8.369	44.533
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2.725**	**0.669**	**10.792**	**4.342**	**0.000**	**4.342**	**1.618**	**3.519**	**8.468**	**4.031**	**8.369**	**44.533**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

NRE includes the following efforts:

[WPCS Main Site Upgrades] WIRELESS PORTABLE COMMUNICATIONS SYSTEM (WPCS) Hardware/Software (CJ032): HW/SW Obsolescence effort addresses critical hardware obsolescence and technology refreshment issues and supporting class upgrades focused on increased capability and reliability. Funding will support procurement of hardware and software changes to the WPCS Main Site.

Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single Chief of Naval Operations (CNO) Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized. Requirements are subject to changes in the CNO ship availability schedule. DSA costs will also vary by kit due to differences in scope and complexity, and first installation compared to follow-on installations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 6 / CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Models of Systems Affected: [No Model Specified] **Modification Type:** TBD **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades												
B Kits												
Recurring												
1.1.1) WPCS Main Site Upgrades - NonOrganic (10)	1 / 2.477	- / -	4 / 10.328	1 / 2.636	- / -	1 / 2.636	- / -	1 / 2.732	3 / 8.343	1 / 2.831	1 / 3.265	12 / 32.612
Subtotal: Recurring	*- / 2.477*	*- / -*	*- / 10.328*	*- / 2.636*	*- / -*	*- / 2.636*	*- / -*	*- / 2.732*	*- / 8.343*	*- / 2.831*	*- / 3.265*	*- / 32.612*
Subtotal: CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades	*1 / 2.477*	*- / -*	*4 / 10.328*	*1 / 2.636*	*- / -*	*1 / 2.636*	*- / -*	*1 / 2.732*	*3 / 8.343*	*1 / 2.831*	*1 / 3.265*	*12 / 32.612*
Subtotal: Procurement, All Modification Items	*- / 2.477*	*- / -*	*- / 10.328*	*- / 2.636*	*- / -*	*- / 2.636*	*- / -*	*- / 2.732*	*- / 8.343*	*- / 2.831*	*- / 3.265*	*- / 32.612*
Support *(All Modification Items)*												
2.1) Non-Recurring Engineering	- / 0.137	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.137
Subtotal: Support	*- / 0.137*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.137*
Installation												
Modification Item 1 of 1: CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades	- / 0.111	- / 0.669	- / 0.464	- / 1.706	- / 0.000	- / 1.706	- / 1.618	- / 0.787	- / 0.125	- / 1.200	- / 5.104	- / 11.784
Subtotal: Installation	*- / 0.111*	*- / 0.669*	*- / 0.464*	*- / 1.706*	*- / -*	*- / 1.706*	*- / 1.618*	*- / 0.787*	*- / 0.125*	*- / 1.200*	*- / 5.104*	*- / 11.784*
Total												
Total Cost (Procurement + Support + Installation)	**2.725**	**0.669**	**10.792**	**4.342**	**0.000**	**4.342**	**1.618**	**3.519**	**8.468**	**4.031**	**8.369**	**44.533**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 6 / CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 15

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Dec 2022	Mar 2024		Mar 2026	Feb 2027	Mar 2028
Delivery Dates		Dec 2023	Jun 2026		Jun 2028	Apr 2029	May 2030

Installation Information

Method of Implementation: [none specified]:: Installation Name: WPCS Main Site Upgrades

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 0.111	1 / 0.669	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.780
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.464	2 / 1.706	0 / 0.000	2 / 1.706	2 / 1.497	- / -	- / -	- / -	0 / 0.000	4 / 3.667
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.121	1 / 0.787	- / -	- / -	0 / 0.000	1 / 0.908
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.125	1 / 0.818	0 / 0.000	1 / 0.943
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.382	3 / 2.623	3 / 3.005
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.104	1 / 1.104
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.377	1 / 1.377
Total	0 / 0.111	1 / 0.669	0 / 0.464	2 / 1.706	0 / 0.000	2 / 1.706	2 / 1.618	1 / 0.787	0 / 0.125	1 / 1.200	5 / 5.104	12 / 11.784

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	1	-	-	-	-	-	1	-	1	-	2	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	5	12
Out	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	1	1	-	-	-	-	-	1	-	-	-	6	12

Footnotes:

(10) HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades requirements are subject to changes in the CNO ship availability schedule. During FY2022: there are(0) procurements and installations include (1) FY21 procurement to be installed on LPD 23. During FY2023: (4) total kits are being procured originally for (4) planned FY24 CNO availabilities on LPD19, LPD20, LPD21, & LPD25.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 6 / CJ032 HW/SW Obsolescence Wireless Portable Communications Main Site Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

During FY2024: In FY24 (2) FY23 kits will be installed on LPD19 (1 kit) and LPD 20 (1 kit). However, LPD21 & LPD25 installations have shifted to FY25 due to a change in the CNO Availability schedule. Additionally in FY24, (1) kit is being procured for installation on (1) FY26 CNO availability on LPD 26. Starting in FY24, procurement planning has moved from 12 months to 15 months, resulting in A-2 years procurement prior to installation, vice A-1 year procurement prior to installation due to actual long lead times. -All hulls will receive new P25 wireless phone upgrades.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 7 / CJ061 Titanium Valve Replacement
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	19.591	3.963	7.213	4.119	0.000	4.119	1.736	4.550	0.300	1.722	0.000	43.194
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	19.591	3.963	7.213	4.119	0.000	4.119	1.736	4.550	0.300	1.722	0.000	43.194
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**19.591**	**3.963**	**7.213**	**4.119**	**0.000**	**4.119**	**1.736**	**4.550**	**0.300**	**1.722**	**0.000**	**43.194**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[Titanium Valve Replacement Phase 1] TITANIUM VALVE REPLACEMENT (CJ061) Titanium Valve Replacement Phase I: Modernization funding is provided to correct mission, safety and reliability issues on mechanical and auxiliary systems and ultimately resolve maintenance intensive system concerns. Funding will support Phase I of the Titanium valve replacement.

[Titanium Valves Replacement Phase 3] Scheduling differences between Phases 1, 2, & 3 are all based on size of valves (8 inches, 10 inches, & 12 inches) and location of valves in the hull, for better installation planning.
Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single Chief of Naval Operations (CNO) Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized. DSA costs will also vary by kit due to differences in scope and complexity, and first installation compared to follow-on installations. All Phase III procurements have been moved to A-2 years prior to installation, vice A-1 year prior to installation, due to actual lead times encountered on previously procured ship sets.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 7 / CJ061 Titanium Valve Replacement
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 3: Titanium Valve Replacement Phase 1												
B Kits												
Recurring												
1.1.1) Titanium Valve Replacement Phase 1 - NonOrganic	2 / 3.728	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.728
Subtotal: Recurring	*- / 3.728*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.728*
Subtotal: Titanium Valve Replacement Phase 1	*2 / 3.728*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*2 / 3.728*
Modification Item 2 of 3: Titanium Valve Replacement Phase 2												
B Kits												
Recurring												
2.1.1) Titanium Valve Replacement Phase 2 - NonOrganic	6 / 4.967	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.958	- / -	- / -	- / -	7 / 5.925
Subtotal: Recurring	*- / 4.967*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.958*	*- / -*	*- / -*	*- / 0.000*	*- / 5.925*
Subtotal: Titanium Valve Replacement Phase 2	*6 / 4.967*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 0.958*	*- / -*	*- / -*	*- / -*	*7 / 5.925*
Modification Item 3 of 3: Titanium Valve Replacement Phase 3												
B Kits												
Recurring												
3.1.1) Titanium Valves Replacement Phase 3 - NonOrganic (11)	2 / 6.447	1 / 3.326	2 / 6.790	- / -	- / -	- / -	- / -	1 / 3.592	- / -	- / -	- / -	6 / 20.155
Subtotal: Recurring	*- / 6.447*	*- / 3.326*	*- / 6.790*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 3.592*	*- / -*	*- / -*	*- / 0.000*	*- / 20.155*
Subtotal: Titanium Valve Replacement Phase 3	*2 / 6.447*	*1 / 3.326*	*2 / 6.790*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 3.592*	*- / -*	*- / -*	*- / -*	*6 / 20.155*
Subtotal: Procurement, All Modification Items	*- / 15.142*	*- / 3.326*	*- / 6.790*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.550*	*- / -*	*- / -*	*- / 0.000*	*- / 29.808*
Installation												
Modification Item 1 of 3: Titanium Valve Replacement Phase 1	- / 0.853	- / 0.000	- / 0.000	- / 0.822	- / 0.000	- / 0.822	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.675
Modification Item 2 of 3: Titanium Valve Replacement Phase 2	- / 3.459	- / 0.000	- / 0.137	- / 1.583	- / 0.000	- / 1.583	- / 0.000	- / 0.000	- / 0.147	- / 0.878	- / 0.000	- / 6.204
Modification Item 3 of 3: Titanium Valve Replacement Phase 3	- / 0.137	- / 0.637	- / 0.286	- / 1.714	- / 0.000	- / 1.714	- / 1.736	- / 0.000	- / 0.153	- / 0.844	- / 0.000	- / 5.507
Subtotal: Installation	*- / 4.449*	*- / 0.637*	*- / 0.423*	*- / 4.119*	*- / -*	*- / 4.119*	*- / 1.736*	*- / -*	*- / 0.300*	*- / 1.722*	*- / 0.000*	*- / 13.386*

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 7 / CJ061 Titanium Valve Replacement
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total												
Total Cost (Procurement + Support + Installation)	19.591	3.963	7.213	4.119	0.000	4.119	1.736	4.550	0.300	1.722	0.000	43.194

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 7 / CJ061 Titanium Valve Replacement
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 3: Titanium Valve Replacement Phase 1

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: Titanium Valve Replacement Phase 1

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 0.853	- / -	- / -	1 / 0.822	0 / 0.000	1 / 0.822	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.675
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.853	- / -	- / -	1 / 0.822	0 / 0.000	1 / 0.822	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.675

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 7 / CJ061 Titanium Valve Replacement
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 3: Titanium Valve Replacement Phase 2

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates					Jun 2026		
Delivery Dates					Dec 2027		

Installation Information

Method of Implementation: [none specified]:: Installation Name: Titanium Valve Replacement Phase 2

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 3.459	- / -	0 / 0.137	2 / 1.583	0 / 0.000	2 / 1.583	- / -	- / -	- / -	- / -	0 / 0.000	6 / 5.179
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.147	1 / 0.878	0 / 0.000	1 / 1.025
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 3.459	- / -	0 / 0.137	2 / 1.583	0 / 0.000	2 / 1.583	- / -	- / -	0 / 0.147	1 / 0.878	0 / 0.000	7 / 6.204

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	7
Out	4	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	7

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 7 / CJ061 Titanium Valve Replacement
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 3 of 3: Titanium Valve Replacement Phase 3

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Jul 2022	Mar 2023			Jun 2026		
Delivery Dates	Jan 2024	Sep 2024			Dec 2027		

Installation Information

Method of Implementation: [none specified]:: Installation Name: Titanium Valves Replacement Phase 3

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 0.137	1 / 0.637	0 / 0.143	1 / 0.768	0 / 0.000	1 / 0.768	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.685
FY 2022	- / -	- / -	0 / 0.143	1 / 0.655	0 / 0.000	1 / 0.655	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.798
FY 2023	- / -	- / -	- / -	0 / 0.291	0 / 0.000	0 / 0.291	2 / 1.736	- / -	- / -	- / -	0 / 0.000	2 / 2.027
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.153	1 / 0.844	0 / 0.000	1 / 0.997
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.137	1 / 0.637	0 / 0.286	2 / 1.714	0 / 0.000	2 / 1.714	2 / 1.736	- / -	0 / 0.153	1 / 0.844	0 / 0.000	6 / 5.507

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	1	-	-	-	-	-	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	6
Out	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	1	6

Footnotes:

(11) Titanium Valve Replacement requirements are subject to changes in the CNO ship availability schedule. During FY2022: (1) kit procured in FY20 will be installed during LPD21, FY22 CNO availability and (1) kit will be procured in FY22 for installation in FY24. During FY2023: (2) kits are being procured for installation during (2) FY25 CNO availabilities on LPD17 and LPD22. During FY2024: (1) prior year will install on LPD 19 and (1) kit procured in FY22 will be installed during the LPD 20, FY24 CNO availability.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 8 / CJ062 HM&E Mechanical/Auxiliary Mods Knuckleboom Crane Improvements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	7.125	0.000	0.696	1.321	0.000	1.321	0.000	0.737	2.377	3.018	1.673	16.947
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	7.125	0.000	0.696	1.321	0.000	1.321	0.000	0.737	2.377	3.018	1.673	16.947
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**7.125**	**0.000**	**0.696**	**1.321**	**0.000**	**1.321**	**0.000**	**0.737**	**2.377**	**3.018**	**1.673**	**16.947**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[Knuckleboom Crane Improvement] KNUCKLEBOOM CRANE IMPROVEMENTS Modernization funding is provided to correct mission, safety and reliability issues on mechanical and auxiliary systems and ultimately resolve maintenance intensive system concerns. Funding will support boat and cargo crane safety upgrades.

A quantity of (1) FY21 installations originally budgeted (FY20 request) for LPD 19 has been deferred to future CNO Availability schedule.
Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single Chief of Naval Operations (CNO) Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized. DSA costs will also vary by kit due to differences in scope and complexity, and first installation compared to follow-on installations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 8 / CJ062 HM&E Mechanical/Auxiliary Mods Knuckleboom Crane Improvements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CJ062 HM&E Mechanical/ Auxiliary Mods Knuckleboom Crane Improvements												
B Kits												
Recurring												
1.1.1) Knuckleboom Crane Improvement - NonOrganic (12)	7 / 3.679	- / -	1 / 0.566	- / -	- / -	- / -	- / -	1 / 0.599	2 / 1.219	2 / 1.241	- / -	13 / 7.304
Subtotal: Recurring	*- / 3.679*	*- / -*	*- / 0.566*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.599*	*- / 1.219*	*- / 1.241*	*- / 0.000*	*- / 7.304*
Subtotal: CJ062 HM&E Mechanical/Auxiliary Mods Knuckleboom Crane Improvements	*7 / 3.679*	*- / -*	*1 / 0.566*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 0.599*	*2 / 1.219*	*2 / 1.241*	*- / -*	*13 / 7.304*
Subtotal: Procurement, All Modification Items	*- / 3.679*	*- / -*	*- / 0.566*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.599*	*- / 1.219*	*- / 1.241*	*- / 0.000*	*- / 7.304*
Support *(All Modification Items)*												
2.1) Non-Recurring Engineering	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.300
Subtotal: Support	*- / 0.300*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.300*
Installation												
Modification Item 1 of 1: CJ062 HM&E Mechanical/ Auxiliary Mods Knuckleboom Crane Improvements	- / 3.146	- / 0.000	- / 0.130	- / 1.321	- / 0.000	- / 1.321	- / 0.000	- / 0.138	- / 1.158	- / 1.777	- / 1.673	- / 9.343
Subtotal: Installation	*- / 3.146*	*- / -*	*- / 0.130*	*- / 1.321*	*- / -*	*- / 1.321*	*- / -*	*- / 0.138*	*- / 1.158*	*- / 1.777*	*- / 1.673*	*- / 9.343*
Total												
Total Cost (Procurement + Support + Installation)	**7.125**	**0.000**	**0.696**	**1.321**	**0.000**	**1.321**	**0.000**	**0.737**	**2.377**	**3.018**	**1.673**	**16.947**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 8 / CJ062 HM&E Mechanical/Auxiliary Mods Knuckleboom Crane Improvements

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CJ062 HM&E Mechanical/Auxiliary Mods Knuckleboom Crane Improvements

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBDTBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Jan 2023	Mar 2024		Nov 2025	Nov 2026	Apr 2028
Delivery Dates		Jan 2024	Mar 2025		Nov 2026	Nov 2027	Apr 2029

Installation Information

Method of Implementation: [none specified]:: Installation Name: Knuckleboom Crane Improvement

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 3.146	- / -	- / -	1 / 0.797	0 / 0.000	1 / 0.797	- / -	- / -	- / -	- / -	2 / 0.000	7 / 3.943
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.130	1 / 0.524	0 / 0.000	1 / 0.524	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.654
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.138	1 / 0.878	- / -	0 / 0.000	1 / 1.016
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.280	2 / 1.491	0 / 0.000	2 / 1.771
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.286	2 / 1.673	2 / 1.959
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 3.146	- / -	0 / 0.130	2 / 1.321	0 / 0.000	2 / 1.321	- / -	0 / 0.138	1 / 1.158	2 / 1.777	4 / 1.673	13 / 9.343

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	4	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	4	13
Out	2	1	-	1	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	7	13

Footnotes:

(12) HM&E Mechanical/Auxiliary Mods Knuckleboom Crane Improvement requirements are subject to changes in the CNO ship availability schedule. During FY2022: (0) kits will be procured in FY22 and there are no planned installations. During FY2023: (1) kit will be procured in FY23 to support installation in FY24. During FY2024: (1) kit procured in FY20 was deferred to FY24 to be installed during LPD 19 CNO Availability. (1) kit procured in FY23 will be installed on LPD 20 during its FY24 CNO availability.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 9 / CJ063 HM&E Mechanical/Auxiliary Mod Common Fuel Rail
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	7.538	0.000	15.082	19.148	0.000	19.148	15.293	31.050	12.745	11.547	41.451	153.854
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	7.538	0.000	15.082	19.148	0.000	19.148	15.293	31.050	12.745	11.547	41.451	153.854
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**7.538**	**0.000**	**15.082**	**19.148**	**0.000**	**19.148**	**15.293**	**31.050**	**12.745**	**11.547**	**41.451**	**153.854**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[Common Fuel Rail] FUEL INJECTION COMMON RAIL Modernization funding is provided to correct mission, safety and reliability issues on Main Propulsion Diesel Engine (MPDE) systems and ultimately resolve maintenance intensive system concerns. Funding will support developing and installing a high-pressure, electronically-controlled fuel injection rail system.

All procurements have been moved to A-2 years prior to installation, vice A-1 year prior to installation, due to actual long lead time material procurements encountered during engineering efforts and schedule planning.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 9 / CJ063 HM&E Mechanical/Auxiliary Mod Common Fuel Rail
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CJ063 HM&E Mechanical/ Auxiliary Mod Common Fuel Rail												
B Kits												
Recurring												
1.1.1) Common Fuel Rail - NonOrganic (13)	1 / 7.234	- / -	2 / 15.082	2 / 15.399	- / -	2 / 15.399	1 / 7.838	3 / 23.937	1 / 8.123	- / -	3 / 28.612	13 / 106.225
Subtotal: Recurring	*- / 7.234*	*- / -*	*- / 15.082*	*- / 15.399*	*- / -*	*- / 15.399*	*- / 7.838*	*- / 23.937*	*- / 8.123*	*- / -*	*- / 28.612*	*- / 106.225*
Subtotal: CJ063 HM&E Mechanical/Auxiliary Mod Common Fuel Rail	*1 / 7.234*	*- / -*	*2 / 15.082*	*2 / 15.399*	*- / -*	*2 / 15.399*	*1 / 7.838*	*3 / 23.937*	*1 / 8.123*	*- / -*	*3 / 28.612*	*13 / 106.225*
Subtotal: Procurement, All Modification Items	*- / 7.234*	*- / -*	*- / 15.082*	*- / 15.399*	*- / -*	*- / 15.399*	*- / 7.838*	*- / 23.937*	*- / 8.123*	*- / -*	*- / 28.612*	*- / 106.225*
Installation												
Modification Item 1 of 1: CJ063 HM&E Mechanical/ Auxiliary Mod Common Fuel Rail	- / 0.304	- / 0.000	- / 0.000	- / 3.749	- / 0.000	- / 3.749	- / 7.455	- / 7.113	- / 4.622	- / 11.547	- / 12.839	- / 47.629
Subtotal: Installation	*- / 0.304*	*- / -*	*- / -*	*- / 3.749*	*- / -*	*- / 3.749*	*- / 7.455*	*- / 7.113*	*- / 4.622*	*- / 11.547*	*- / 12.839*	*- / 47.629*
Total												
Total Cost (Procurement + Support + Installation)	**7.538**	**0.000**	**15.082**	**19.148**	**0.000**	**19.148**	**15.293**	**31.050**	**12.745**	**11.547**	**41.451**	**153.854**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment	**Modification Number / Title:** 9 / CJ063 HM&E Mechanical/Auxiliary Mod Common Fuel Rail

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CJ063 HM&E Mechanical/Auxiliary Mod Common Fuel Rail

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 23

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Dec 2022	Apr 2024	Apr 2025	Apr 2026	Dec 2026	
Delivery Dates		Nov 2024	Mar 2026	Mar 2027	Mar 2028	Nov 2028	

Installation Information

Method of Implementation: [none specified]:: Installation Name: Common Fuel Rail

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 0.304	- / -	- / -	1 / 3.102	0 / 0.000	1 / 3.102	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.406
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.647	0 / 0.000	0 / 0.647	2 / 6.796	- / -	- / -	- / -	0 / 0.000	2 / 7.443
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.659	2 / 6.778	- / -	- / -	0 / 0.000	2 / 7.437
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.335	1 / 3.598	- / -	0 / 0.000	1 / 3.933
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.024	3 / 11.191	0 / 0.000	3 / 12.215
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.356	1 / 3.620	1 / 3.976
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 9.219	3 / 9.219
Total	0 / 0.304	- / -	- / -	1 / 3.749	0 / 0.000	1 / 3.749	2 / 7.455	2 / 7.113	1 / 4.622	3 / 11.547	4 / 12.839	13 / 47.629

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	-	2	-	-	1	-	-	-	2	-	-	1	4	13
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1	-	1	-	-	-	-	9	13

Footnotes:

(13) HM&E Mechanical/Auxiliary Mod Common Fuel Rail requirements are subject to changes in the CNO ship availability schedule. During FY 2022: The previously planned procurement for LPD21 in support of FY24 CNO availability, and supporting installation, have been removed per reduced funding. During FY 2023: (2) kits will be procured for installation during FY25 CNO availabilities for LPD 17 (1 kit) and LPD 27 (1 kit). During FY2024: (1) FY21 procurement is planned for installation on LPD20 during FY24 CNO availability. (2) kits will be procured for planned FY26 installations on LPD 23 (1 kit) and LPD 26 (1 kit).

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0204202N	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 197		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	137.493	71.561	314.333	232.124	0.000	232.124	414.423	101.175	10.144	11.662	-	1,292.915
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	137.493	71.561	314.333	232.124	0.000	232.124	414.423	101.175	10.144	11.662	-	1,292.915
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**137.493**	**71.561**	**314.333**	**232.124**	**0.000**	**232.124**	**414.423**	**101.175**	**10.144**	**11.662**	**-**	**1,292.915**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	5.818	-	5.818	-	-	-	-	-	5.818
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DDG 1000, a multi-mission surface combatant, will serve as a versatile asset in the context of future Naval Strategy. Armed with an array of weapons, DDG 1000 will provide the Joint Force Commander with precision strike and volume fires. Designed with sustainable payload, multi-spectral stealth and optimal manning, DDG 1000 will take the fight to the enemy with unprecedented striking power.

The program is continuing to integrate the Conventional Prompt Strike (CPS) weapons system onto the Zumwalt class. CPS integration is a top CNO priority that enhances the Navy's lethality by providing a critical hypersonic attack capability to prevail in Great Power competition. This naval surface hypersonic strike capability will allow the Zumwalt class to conduct independent forward deployed operations and prosecute deep-inland, time-critical, soft and medium-hardened targets in a contested environment. Additionally, when combined with the low observable characteristics of the Zumwalt platform, CPS enhances a uniquely lethal and survivable naval surface platform. The Zumwalt Class will enhance U.S. conventional power projection by providing an independent forward deployed strike platform, with longer range, shorter time of flight, and higher survivability against enemy defenses compared to current capabilities.

The Navy will integrate CPS into USS Zumwalt (DDG 1000) and USS Michael Monsoor (DDG 1001) during Building Yard Modernization Periods (BYMP) instead of traditional Docking Selected Restricted Availabilities (DSRA). This shipyard period type maximizes learning and efficiency in order to speed the capability to the fleet. The program will integrate CPS into Lyndon B. Johnson (DDG 1002) during new construction, prior to the ship's arrival in homeport and prior to installation of CPS on DDG 1001. Full CPS operational capability on Zumwalt Class is achieved once CPS is installed in all three ships and they are turned over for Fleet operations.

DDG 1000 and DDG 1001 are commissioned ships and the CPS installations for these ships is budgeted with Other Procurement, Navy (OPN) funding. DDG 1002 CPS installation is budgeted in Shipbuilding & Conversion, Navy (SCN) funding. Advanced Payload Modules (APM) are interchangeable end items and are budgeted in OPN.

The program provides for DDG 1000 combat system hardware/equipment suite technology refresh to support obsolescence management and address reliability, maintainability & availability (RM&A) issues following fielding. Combat System hardware will be over a decade obsolete at the time of delivery. Active management of commercial off-the-shelf (COTS) obsolescence via hardware/equipment technology refresh will be required to ensure Zumwalt class ships reach their design service life. Additionally, the program will sustain and upgrade in-service Zumwalt ships in order to achieve their Expected Service Life (ESL). Upgrades will be mission capable in countering current and projected threats, improve operational capabilities, and comply with requirements.

[P40A / DDG 1000 Class Product Improvement]: Funding provides engineering changes to the Combat System necessary to address component obsolescence, recurring cybersecurity requirements and a 20-module SM-6 capability on DDG 1000, during her BYMP. This effort develops or updates drawings and technical documentation, develops work specifications and technical documentation to integrate

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0204202N	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 197		

planned changes into the baseline design. Material will be procured, kitted, delivered and installed on the ship. Planning, prioritization and installation of ship alterations (ShipAlts) will be done during maintenance availability periods within the Fleet Modernization Program. Logistics product updates are provided to ensure latest ship's crew proficiency and understanding. Funding also supports software licenses and associated cyber security hardware, necessary to prevent vulnerabilities. Procures shipboard assets as well as Zumwalt Training Facility updates, to maintain similar configuration.

[P40A / Critical Cybersecurity Upgrades and Improvements]: The TSCE integrates all the ship's sensors and weapons into a cohesive Combat System (CS). Funding is required for engineering and hardware procurement to support Windows 10 Upgrade, Linux Kernel Integrity Validation tool, and Secure Data Distribution Services. Windows 10 upgrade is necessary to prevent cyber security vulnerabilities and is mandated by OPNAV requirements. Linux Kernel Integrity Validation provides methods for detecting malicious activity (including "Zero-day" attacks) in order to keep pace with ongoing threats. Secure Data Distribution Services provides detection and countermeasure capabilities to ensure data confidentiality and integrity. Funding supports procurement of shipboard assets for deployment capability and configuration alignment with the ZUMWALT Training Facility.

[P40A / TSCE Diminishing Manufacturing Sources & Material Shortages (DMSMS)]: FY2024 funding supports DDG 1002's SPY-3 refurbishment, including procurement and replacement of failed or obsolescent materiel. DDG 1002's SPY-3 array was previously utilized on self-defense test ship, requiring refurbishment prior to install on DDG 1002. FY 2025 OPN funding is required to procure ZUMWALT Class ships network and computing equipment to address obsolescence and DMS concerns to sustain the ZUMWALT Class TSCE and minimize total operation costs. Funding is required to maintain ship readiness; without funding, obsolescence in ZUMWALT Class network and computing environments will impact the ship's ability to get underway and decrease capacity for sparing. Non-recurring engineering (NRE) is based on SD-22 solution costs adjusted for inflation for current and predicted obsolescence. Funding for TSCE DMSMS funds projected and unplanned DMSMS Cases, both life of type buy and redesign of major components within TSCE. Current DMSMS percentage of the TSCE configuration is 85-95% obsolete. Through FY 2027, DMSMS cases will increase in severity as components within the system become end of life. The current configuration requires support through FY 2027 until TSCE modernization commences on the final ship.

[P40A / TSCE Modernization Engineering]: Combat system computing infrastructure (data centers, network infrastructure & communications devices) is more than a decade old and requires extensive modernization and technology refresh to sustain operations, mitigate obsolescence, provides a hardware baseline and software development processes that align to Integrated Combat System efforts. Funding provides non-recurring engineering labor necessary for integration, testing, and deployment of new computing hardware and peripherals. FY23 funded software architecture development to adapt the combat system software to the upgraded hardware configuration. The increase in FY24 funds detailed design of hardware configuration, migration of the software baseline into a containerized architecture, and lab integration of modified software with new hardware, as well as software and hardware engineering to address any issues discovered during testing. Thorough lab integration is required prior to installation of shipboard equipment starting in FY25. The Zumwalt-class Operational Availability (Ao), as specified in the Operational Requirements Document (ORD), is the driving requirement for TSCE modernization. Additionally, the program is procuring life-type buys to support the ships through the start of DDG 1001 availability in FY27; without modernization, the ships will not have sufficient spares to meet Ao requirements starting in FY25.

[P40A / TSCE Moderization Lab Equipment]: Funding provides network and data center equipment at both the OEM lab and the Zumwalt Training Facility to represent the tactical configuration for the purposes of integration, testing, support, and training. Network equipment encompasses routers, switches, wireless access points, and a variety of audio/visual peripherals for communication and security. Data center equipment includes core processing, data storage, and encryption devices. This ship-representative equipment is also necessary for troubleshooting any issues that are discovered on the ships, in order to provide continuous fleet support.

[P40A / TSCE Modernization Procurement]: FY23 TSCE Mod procurement for DDG 1000 was deferred. $55.6M of FY23 funding programmed for DDG 1000 TSCE has been realigned to CPS P-3a to address installation shortfalls. $56.725M of FY24 procurement funding transferred to SCN LI 2119 for DDG 1002. Follow-on TSCE modernization procurements are planned in FY25 and FY26 for DDG 1001 and DDG 1000, respectively.

[P40A / HM&E Land Based Test Environment (LBTE)]: Procure material and equipment for LBTE will lead to greater understanding and competency for DDG 1000 controls systems and will lead to less dependency on the Original Equipment Manufacturer (OEM) to provide life-cycle support for hardware, software and cyber security.

[P40A / Data Center Lab (Combat System Maintenance and Hardware)]: Funding is to populate the contractor's software development lab with tactical element hardware and to establish a government integration lab. Currently the contractor's lab is utilizing DDG 1002 assets (SGS/AC, CDLMS/NGC2P, IFF, etc.), which will be removed to support DDG 1002 combat system installation during the combat availability. To maintain the contractor lab capability, additional hardware will need to be procured.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0204202N	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 197		

[P40A / Electro-Optical / Infrared (EO/IR) Sensor]: Procure three shipsets (1 shipset = 3 sensors plus 1 spare) across FY 2021 thru FY 2023. DDG 1000 is a low radar cross section (RCS) vessel that utilizes EO/IR tactically. In conjunction with NAVSEA 05 and the Technical Warrant Holder (TWH), conducted a study of available EO/IR sensors and have selected the compliant sensor available to meet both the RCS and EO/IR functional requirements of DDG 1000.

[P40A / C4I (Business) Network Sustainment]: TSCE includes a C4I (business) network, which currently resides on an unsupportable Windows 7 operating system with no sustainment plan in place. Funding will upgrade the current C4I (business) network from Windows 7 to Windows 10, procure licenses, and replace laptops. Critical Cyber security Upgrades and Improvements funded the upgrade of the TSCE to Windows 10. This did not fund upgrades to any of the applications that utilize the TSCE network such as COMPOSE 4.0.1, GCCS-M, NGC2P, etc. Since there is no program of record support for COMPOSE 4.0.1 as installed on DDG 1000, this funds an upgrade to COMPOSE 4.0.1 to Windows 10, and provides a sustainment path for this system.

[P40A / Radar Absorbing Material (RAM) and Composite Sustainment]: Recurring OPN is required to procure, install and repair RAM on board the DDG 1000 Class.

[P40A / MK 57 CEU Technical Development Package]: Funding required for engineering development efforts to prepare and approve the DDG 1000 class MK57 universal canister electrical unit (UCEU) technical data package (TDP). The TDP is necessary to issue a build-to-print request for proposal to industry, for development and test the UCEU hardware. Naval Surface Warfare Center Dahlgren will be the primary activity developing the TDP. The procurement and testing of the UCEU will be funded from OPN LI 5231 Ship Missile Support Equipment.

[P40A / Common Electric Module Shock Kits]: Common Electric Module Shock Kits (CEMs) - Procure new CEMs to replace current fielded versions that are obsolete. New CEMs will give the crew the ability to sustain the Common Display System, operate and maintain the TSCE system as well, and the continued activation of the ZUMWALT Combat System.

[P40A / DDG 1000 SM-6 Integration]: Integration of SM-6 capability. Funding required for TSCE Integration (OPN), testing, and Live Fire Testing (RDT&E). Funding will procure the Vertical Launch System Global Positioning System Integration (VGI) components for the necessary ephemeris data.

[P40A / DDG 1000 NTCDL Integration]: Upgrade Tactical Common Data Link (TCDL) to Network Tactical Common Data Link (NTCDL) by removing TCDL from the ship's 07-level and replacing with deckhouse mounted NTCDL. TCDL is a Commercial Off-The-Shelf (COTS) antenna which Naval Information Warfare Systems Command supports whereas NTCDL is a full program of record. Will increase capacity for Common Data Link (CDL) links, as well as freeing up 07-level space and improving RCS to allow for installation of other antennas. Improves signature and increases capacity of CDL links.

[P40A / DDG 1000 SPECTRAL Integration]: Spectral is the next generation Information Warfare weapons system enhancing signals exploitation capabilities. Spectral is scalable, mission-configurable, and modular to rapidly respond to new threats or capabilities. A stronger, faster, integrated capability enables data sharing with other systems to support Electromagnetic Maneuver Warfare (EMW)/Integrated Fires (IF). Spectral detects, classifies, and tracks Signals of Interest (SOI) beyond current stated requirements to improve automation, operability, and intuitiveness in the Tasking, Collection, Processing, Exploitation, and Dissemination (TCPED) process. Agile software methodology ensures flexibility in meeting emergent requirements and addressing Fleet user priorities

[P3A / Conventional Prompt Strike]: Perform shipbuilder procurements and modifications for installation of CPS on DDG 1000 Class. To include planning, design, removal of MT61 (forward Advanced Gun System (AGS) mount) and MT62 (aft AGS mount), HM&E material, combat system integration, and procurement/installation of advanced payload modules.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204202N	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 197

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	DDG 1000 Class Support Equipment	P-5a, P-21			- / 137.493	- / 51.761	- / 68.656	- / 77.030	- / -	- / 77.030
P-3a	1 / Conventional Prompt Strike (TBD)				- / 0.000	- / 19.800	- / 245.677	- / 155.094	- / 0.000	- / 155.094
P-40	**Total Gross/Weapon System Cost**				**- / 137.493**	**- / 71.561**	**- / 314.333**	**- / 232.124**	**- / 0.000**	**- / 232.124**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	DDG 1000 Class Support Equipment	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Conventional Prompt Strike (TBD)				- / 336.065	- / 81.448	- / 0.000	- / 0.000	- / 0.000	- / 838.084
P-40	**Total Gross/Weapon System Cost**				**- / 414.423**	**- / 101.175**	**- / 10.144**	**- / 11.662**	**- / -**	**- / 1,292.915**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY23 to FY24 decrease is due to moving DDG 1002 CPS and TSCE mod funding to SCN LI 2119. DDG 1002 will be the second ship of the class to receive the CPS capability with the installation occurring prior to final delivery of the ship. Additionally, DDG 1001 TSCE Modernization procurement has shifted from FY24 to FY25.

Beginning with a $15M Congressional Addition in FY21 and supported by FY22 and FY23 funding, the Navy has designed a Large Missile Vertical Launch System (LMVLS) to support the addition of the CPS weapons systems to the Zumwalt class during the first planned maintenance period of each ship, starting with DDG 1000's FY24 DSRA. Based on the scope of the CPS installation work on the Zumwalt class, the Navy conducted a detailed assessment of the execution plan in the Fall of 2022 and established BYMP to replace the scheduled DSRAs for DDG 1000 (FY24) and DDG 1001 (FY25). The program established a sole-source contract with Huntington Ingalls Industries (HII) for production planning and execution of BYMPs. The OPN budget exhibits reflect the matured design and updates to the acquisition plan. The exhibits reflect removal of procurement and installation cost for DDG 1002, which is now included in the program's SCN budget exhibit. Finally, these exhibits reflect an update to the procurement profile and associated cost for APMs.

DDG 1000 Class Product Improvement funding supports the processing and implementation of critical changes within the Combat System. Funding is required to resolve equipment issues, provide product improvements and incorporate new capabilities in the class. Additionally, funding supports a 20-module SM-6 surface strike capability on DDG 1000.

TSCE Critical Cybersecurity Upgrades and Improvements funding is required for engineering and hardware procurement to support Windows 10 Upgrade, Linux Kernel Integrity Validation tool, and Secure Data Distribution Services. Validation provides methods for detecting malicious activity (including "Zero-day" attacks) in order to keep pace with ongoing threats. Secure Data Distribution Services provides detection and countermeasure capabilities to ensure data confidentiality and integrity.

TSCE DMSMS Existing DDG 1000 and follow hardware is more than a decade obsolete. Efforts includes NRE required to identify and qualify applicable obsolete parts, prepare drawing updates (Lowest Replaceable Unit (LRU) & cabinet level), prepare Integrated Logistics Support (ILS) updates (LRU & cabinet level) and procure replacement parts. DMSMS procurement are necessary until DDG 1001 commences TSCE Modernization in FY27.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0204202N	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 197		

TSCE Modernization Engineering increase in FY24 funds detailed design of hardware configuration, migration of the software baseline into a containerized architecture, and lab integration of modified software with new hardware, as well as software and hardware engineering to address any issues discovered during testing. Thorough lab integration is required prior to installing shipboard equipment in FY25.

Data Center Lab (Combat System Maintenance and Hardware): Efforts concluded in FY22, no further requirement exists.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	**Aggregated Items Title:** DDG 1000 Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) DDG 1000 CLASS SUPPORT EQUIPMENT																				
1.1) DDG 1000 Class On Board Trainer(†)	A		10,667K	3	32.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) DDG 1000 Class Operating System Refresh	A		-	-	29.735	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) DDG 1000 CLASS SUPPORT EQUIPMENT			**-**	**-**	***61.735***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) DDG 1000 CLASS SUPPORT																				
2.1) Production Engineering	A		-	-	1.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) DDG 1000 CLASS SUPPORT			**-**	**-**	***1.400***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) DDG 1000 CLASS HM&E PRODUCT IMPROVEMENT																				
3.1) DDG 1000 Class Product Improvement	A		-	-	8.725	-	-	2.316	-	-	1.935	-	-	4.225	-	-	-	-	-	4.225
3.2) Critical Cybersecurity Upgrades and Improvements	A		-	-	9.700	-	-	2.720	-	-	2.300	-	-	3.019	-	-	-	-	-	3.019
3.3) Common Display System	A		-	-	4.865	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.4) TSCE Diminishing Manufacturing Sources & Material Shortages (DMSMS)	A		-	-	18.719	-	-	9.555	-	-	8.958	-	-	8.876	-	-	-	-	-	8.876
3.5) TSCE Modernization Engineering	A		-	-	-	-	-	-	-	-	19.107	-	-	21.250	-	-	-	-	-	21.250
3.6) TSCE Moderization Lab Equipment(†)	A		-	-	-	18,500K	1	18.500	21,500K	1	21.500	19,660K	1	19.660	-	-	-	19,660K	1	19.660
3.8) HM&E Land Based Test Environment (LBTE)(†)	A		1,529K	1	1.529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.9) Data Center Lab (Combat System Maintenance and Hardware)(†)	A		4,720K	1	4.720	3,774K	1	3.774	-	-	-	-	-	-	-	-	-	-	-	-
3.10) Electro-Optical / Infrared (EO/IR) Sensor(†)	A		4,900K	1	4.900	5,096K	1	5.096	5,256K	1	5.256	-	-	-	-	-	-	-	-	-
3.11) C4I (Business) Network Sustainment	A		-	-	6.500	-	-	6.900	-	-	1.900	-	-	1.600	-	-	-	-	-	1.600

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0947 / DDG 1000 Class Support Equipment	Aggregated Items Title: DDG 1000 Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
3.12) Radar Absorbing Material (RAM) and Composite Sustainment	A		-	-	1.300	-	-	1.200	-	-	1.000	-	-	1.300	-	-	-	-	-	1.300
3.13) MK 57 CEU Technical Development Package	A		-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.14) Common Electric Module Shock Kits	A		-	-	5.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) DDG 1000 CLASS HM&E PRODUCT IMPROVEMENT			**-**	**-**	***70.658***	**-**	**-**	***50.061***	**-**	**-**	***61.956***	**-**	**-**	***59.930***	**-**	**-**	**-**	**-**	**-**	***59.930***
4) DDG 1000 SURFACE STRIKE																				
4.1) DDG 1000 SM-6 Integration	A		-	-	2.600	-	-	1.700	-	-	0.900	-	-	-	-	-	-	-	-	-
4.2) DDG 1000 NTCDL Integration	A		-	-	1.100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.3) DDG 1000 SPECTRAL Integration (1)	A		-	-	-	-	-	-	-	-	5.800	5,700K	3	17.100	-	-	-	5,700K	3	17.100
Subtotal: 4) DDG 1000 SURFACE STRIKE			**-**	**-**	***3.700***	**-**	**-**	***1.700***	**-**	**-**	***6.700***	**-**	**-**	***17.100***	**-**	**-**	**-**	**-**	**-**	***17.100***
Total			**-**	**-**	**137.493**	**-**	**-**	**51.761**	**-**	**-**	**68.656**	**-**	**-**	**77.030**	**-**	**-**	**-**	**-**	**-**	**77.030**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(1) SPECTRAL: FY24 funding to procure 3 Shipsets of below deck equipment. FY23 funding supports non-recurring engineering efforts. $11.2M of FY23 funding realigned to CPS P-3a to support CPS installation shortfalls on DDG 1000.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0947 / DDG 1000 Class Support Equipment	Aggregated Items: DDG 1000 Class Support Equipment

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) DDG 1000 CLASS SUPPORT EQUIPMENT												
1.1) DDG 1000 Class On Board Trainer(†)		2019	Raytheon / Portsmouth, RI	SS / FP	NAVSEA	Sep 2019	Sep 2020	3	10,667K	N	Jul 2017	Aug 2018
3) DDG 1000 CLASS HM&E PRODUCT IMPROVEMENT												
3.6) TSCE Moderization Lab Equipment(†)		2022 (2)	Raytheon / Tewksbury, MA	C / FFP	WNY	Mar 2023	May 2024	1	18,500K	N		Apr 2022
3.6) TSCE Moderization Lab Equipment(†)		2023 (3)	Raytheon / Tewksbury, MA	C / FFP	WNY	Mar 2023	May 2024	1	21,500K	N		Apr 2022
3.8) HM&E Land Based Test Environment (LBTE)(†)		2021	L3 KEO / NORTHAMPTON, MA	C / FFP	NSWC PD	Dec 2020	Jun 2021	1	1,529K	Y		Jun 2020
3.9) Data Center Lab (Combat System Maintenance and Hardware)(†)		2021	Raytheon Corporation / Marlborough, MA	SS / FFP	NAVSEA	Feb 2021	Feb 2022	1	4,720K	Y		Jun 2020
3.9) Data Center Lab (Combat System Maintenance and Hardware)(†)		2022	Raytheon Corporation / Marlborough, MA	C / TBD	NAVSEA	Oct 2021	Oct 2022	1	3,774K	N		Jun 2020
3.10) Electro-Optical / Infrared (EO/IR) Sensor(†)		2021	TBD / UNKNOWN	C / TBD	NAVSEA	Oct 2020	Apr 2021	1	4,900K	Y		Jun 2020

(†) indicates the presence of a P-21

Footnotes:

(2) Funding provides network and data center equipment at both the OEM lab and the Zumwalt Training Facility to represent the tactical configuration for the purposes of integration, testing, support, and training. Network equipment encompasses routers, switches, wireless access points, and a variety of audio/visual peripherals for communication and security. Data center equipment includes core processing, data storage, and encryption devices. FY22 includes 1 Network lab set, 1 Data Center lab set. FY23 includes 1 spares for lab network, 1 spares for data center, 1 data center for training facility. FY24 includes 1 Network lab set, 1 Data Center lab set.

(3) Funding provides network and data center equipment at both the OEM lab and the Zumwalt Training Facility to represent the tactical configuration for the purposes of integration, testing, support, and training. Network equipment encompasses routers, switches, wireless access points, and a variety of audio/visual peripherals for communication and security. Data center equipment includes core processing, data storage, and encryption devices. FY22 includes 1 Network lab set, 1 Data Center lab set. FY23 includes 1 spares for lab network, 1 spares for data center, 1 data center for training facility. FY24 includes 1 Network lab set, 1 Data Center lab set.

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9

P-1 Line Item Number / Title: 0947 / DDG 1000 Class Support Equipment

Aggregated Items: DDG 1000 Class Support Equipment

Items (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
										Calendar Year 2019												Calendar Year 2020									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1) DDG 1000 CLASS SUPPORT EQUIPMENT																															
1.1) DDG 1000 Class On Board Trainer																															
	3	2019	NAVY	3	0	3												A -	-	-	-	-	-	-	-	-	-	-	-	3	0
3) DDG 1000 CLASS HM&E PRODUCT IMPROVEMENT																															
3.6) TSCE Moderization Lab Equipment																															
	4	2022	NAVY	1	0	1																									1
	4	2023	NAVY	1	0	1																									1
3.8) HM&E Land Based Test Environment (LBTE)																															
	5	2021	NAVY	1	0	1																									1
3.9) Data Center Lab (Combat System Maintenance and Hardware)																															
	6	2021	NAVY	1	0	1																									1
	6	2022	NAVY	1	0	1																									1
3.10) Electro-Optical / Infrared (EO/IR) Sensor																															
	7	2021	NAVY	1	0	1																									1
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9

P-1 Line Item Number / Title: 0947 / DDG 1000 Class Support Equipment

Aggregated Items: DDG 1000 Class Support Equipment

Items (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1) DDG 1000 CLASS SUPPORT EQUIPMENT																															
1.1) DDG 1000 Class On Board Trainer																															
	3	2019	NAVY	3	3	0																									0
3) DDG 1000 CLASS HM&E PRODUCT IMPROVEMENT																															
3.6) TSCE Moderization Lab Equipment																															
	4	2022	NAVY	1	0	1																									1
	4	2023	NAVY	1	0	1																									1
3.8) HM&E Land Based Test Environment (LBTE)																															
	5	2021	NAVY	1	0	1			A -	-	-	-	-	-	1																0
3.9) Data Center Lab (Combat System Maintenance and Hardware)																															
	6	2021	NAVY	1	0	1					A -	-	-	-	-	-	-	-	-	-	-	-	1								0
	6	2022	NAVY	1	0	1													A -	-	-	-	-	-	-	-	-	-	-	-	1
3.10) Electro-Optical / Infrared (EO/IR) Sensor																															
	7	2021	NAVY	1	0	1	A -	-	-	-	-	-	1																		0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9

P-1 Line Item Number / Title: 0947 / DDG 1000 Class Support Equipment

Aggregated Items: DDG 1000 Class Support Equipment

Items (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
										Calendar Year 2023												Calendar Year 2024									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1) DDG 1000 CLASS SUPPORT EQUIPMENT																															
1.1) DDG 1000 Class On Board Trainer																															
	3	2019	NAVY	3	3	0																									0
3) DDG 1000 CLASS HM&E PRODUCT IMPROVEMENT																															
3.6) TSCE Moderization Lab Equipment																															
	4	2022	NAVY	1	0	1						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	1					0
	4	2023	NAVY	1	0	1						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	1					0
3.8) HM&E Land Based Test Environment (LBTE)																															
	5	2021	NAVY	1	1	0																									0
3.9) Data Center Lab (Combat System Maintenance and Hardware)																															
	6	2021	NAVY	1	1	0																									0
	6	2022	NAVY	1	0	1	1																								0
3.10) Electro-Optical / Infrared (EO/IR) Sensor																															
	7	2021	NAVY	1	1	0																									0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	**Aggregated Items:** DDG 1000 Class Support Equipment

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon - Portsmouth, RI			TBD	0	0	18	18	0	0	12	12
2	Raytheon - Tewksbury, MA			TBD	0	0	14	14	0	0	14	14
3	L3 KEO - NORTHAMPTON, MA			TBD	0	2	6	8	0	0	0	0
4	Raytheon Corporation - Marlborough, MA			TBD	0	0	12	12	0	0	0	0
5	TBD - UNKNOWN			TBD	0	1	6	7	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	**Modification Number / Title:** 1 / Conventional Prompt Strike
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	19.800	245.677	155.094	0.000	155.094	336.065	81.448	0.000	0.000	0.000	838.084
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	19.800	245.677	155.094	0.000	155.094	336.065	81.448	0.000	0.000	0.000	838.084
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**19.800**	**245.677**	**155.094**	**0.000**	**155.094**	**336.065**	**81.448**	**0.000**	**0.000**	**0.000**	**838.084**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY24 CPS Shipbuilding, Support, and Installation funding will support work specs for Advanced Gun System (AGS) removal, CPS HM&E modifications, and identifying CPS space requirements. The planning yard shall address arrangements, primary structure, and existing distributive system impacts and reconstruction. Additionally, Long Lead Material procurements of the Launcher Tubes, Hatches, Shock Isolation, and Rubber Boots to be installed on DDG 1000 during the Build Yard Modernization Period (BYMP) scheduled to begin in FY24.

FY24 Advanced Payload Module (APM) funding will procure 3 end item units to be installed on DDG 1000 Class ships during the BYMP or windows of opportunity following the BYMP. Advanced Payload Modules (APM) are interchangeable end items and are budgeted in OPN for all DDG 1000 Class hulls.

[CPS - Advanced Payload Modules] FY24 OPN funds required to procure 3 Advanced Payload Modules (APM) from Lockheed Martin. The production lead time for APMs is 30 months. Delivery schedule for APMs will be in 3 month intervals based on ability to achieve desired industrial capacity. The installation period required for APMs is less than two weeks and can occur during windows of opportunity for the designated ship.

[AGS Removal, CPS HM&E Modifications, Shore Support Services] Will support work specs for Advanced Gun System (AGS) removal and identifying CPS space requirements. The planning yard shall address arrangements, primary structure, and existing distributive system impacts and reconstruction.
In addition, this funding will provide waterfront support and installation teams across industry and government.
Contract Award for DDG 1000 Build Yard Modernization Period (BYMP) planned for Q4 FY23. The industry yard for the BYMP is Huntington Ingalls located in Pascagoula, MS.
FY23/24 Funding - DDG 1000
FY25/26 funding - DDG 1001

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	**Modification Number / Title:** 1 / Conventional Prompt Strike
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:** 0204202N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 2: Conventional Prompt Strike - Shipbuilding												
B Kits												
Non-Recurring												
1.1.1) Rubber Boots, Shock Isolation, Hatches - NonOrganic (4)	- / -	- / -	4 / 15.900	- / -	- / -	- / -	4 / 16.100	- / -	- / -	- / -	- / -	8 / 32.000
1.1.2) Launcher Tubes - NonOrganic (5)	- / -	4 / 19.800	4 / 19.980	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 39.780
1.1.3) CPS HM&E Material - NonOrganic (6)	- / -	- / -	- / 29.691	- / 9.097	- / -	- / 9.097	- / 36.510	- / 2.530	- / -	- / -	- / -	- / 77.828
Subtotal: Non-Recurring	*- / 0.000*	*- / 19.800*	*- / 65.571*	*- / 9.097*	*- / -*	*- / 9.097*	*- / 52.610*	*- / 2.530*	*- / -*	*- / -*	*- / 0.000*	*- / 149.608*
Subtotal: Conventional Prompt Strike - Shipbuilding	*- / -*	*4 / 19.800*	*8 / 65.571*	*- / 9.097*	*- / -*	*- / 9.097*	*4 / 52.610*	*- / 2.530*	*- / -*	*- / -*	*- / -*	*16 / 149.608*
Modification Item 2 of 2: Conventional Prompt Strike - Advanced Payload Modules												
B Kits												
Non-Recurring												
2.1.1) CPS - Advanced Payload Modules - NonOrganic (7)	- / -	- / -	2 / 57.000	3 / 85.000	- / -	3 / 85.000	5 / 142.100	2 / 59.000	- / -	- / -	- / -	12 / 343.100
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / 57.000*	*- / 85.000*	*- / -*	*- / 85.000*	*- / 142.100*	*- / 59.000*	*- / -*	*- / -*	*- / 0.000*	*- / 343.100*
Subtotal: Conventional Prompt Strike - Advanced Payload Modules	*- / -*	*- / -*	*2 / 57.000*	*3 / 85.000*	*- / -*	*3 / 85.000*	*5 / 142.100*	*2 / 59.000*	*- / -*	*- / -*	*- / -*	*12 / 343.100*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 19.800*	*- / 122.571*	*- / 94.097*	*- / -*	*- / 94.097*	*- / 194.710*	*- / 61.530*	*- / -*	*- / -*	*- / 0.000*	*- / 492.708*
Support *(All Modification Items)*												
3.1) AGS Removal, CPS HM&E Modifications, Shore Support Services	- / -	- / -	- / 110.206	- / 60.247	- / -	- / 60.247	- / 126.505	- / 19.418	- / -	- / -	- / -	- / 316.376
Subtotal: Support	*- / 0.000*	*- / -*	*- / 110.206*	*- / 60.247*	*- / -*	*- / 60.247*	*- / 126.505*	*- / 19.418*	*- / -*	*- / -*	*- / 0.000*	*- / 316.376*
Installation												
Modification Item 1 of 2: Conventional Prompt Strike - Shipbuilding	- / 0.000	- / 0.000	- / 12.400	- / 0.000	- / 0.000	- / 0.000	- / 13.600	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 26.000
Modification Item 2 of 2: Conventional Prompt Strike - Advanced Payload Modules	- / 0.000	- / 0.000	- / 0.500	- / 0.750	- / 0.000	- / 0.750	- / 1.250	- / 0.500	- / 0.000	- / 0.000	- / 0.000	- / 3.000
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 12.900*	*- / 0.750*	*- / -*	*- / 0.750*	*- / 14.850*	*- / 0.500*	*- / -*	*- / -*	*- / 0.000*	*- / 29.000*
Total												

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	**Modification Number / Title:** 1 / Conventional Prompt Strike
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:** 0204202N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	**0.000**	**19.800**	**245.677**	**155.094**	**0.000**	**155.094**	**336.065**	**81.448**	**0.000**	**0.000**	**0.000**	**838.084**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	**Modification Number / Title:** 1 / Conventional Prompt Strike
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 2: Conventional Prompt Strike - Shipbuilding

Manufacturer Information

Manufacturer Name: Bath Iron Works (BIW)Name	Manufacturer Location: Bath, Maine
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 24

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Aug 2022	Nov 2022					
Delivery Dates	Jul 2024	Oct 2024					

Manufacturer Name: BIW	Manufacturer Location: Bath, Maine
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Oct 2022		Oct 2024			
Delivery Dates		Mar 2024		Mar 2026			

Installation Information

Method of Implementation: Build Yard Modernization Period:: Installation Name: Rubber Boots, Shock Isolation, Hatches

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 6.200	4 / 0.000	0 / 0.000	4 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	4 / 6.200
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 6.800	4 / 0.000	- / -	- / -	0 / 0.000	4 / 6.800
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	0 / 6.200	4 / 0.000	0 / 0.000	4 / 0.000	0 / 6.800	4 / 0.000	- / -	- / -	0 / 0.000	8 / 13.000

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	8
Out	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	8

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	**Modification Number / Title:** 1 / Conventional Prompt Strike

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 2: Conventional Prompt Strike - Shipbuilding

Installation Information

Method of Implementation: Build Yard Modernization Period (BYMP):: Installation Name: Launcher Tubes

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	0 / 6.200	4 / 0.000	0 / 0.000	4 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	4 / 6.200
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	4 / 6.800	- / -	- / -	- / -	0 / 0.000	4 / 6.800
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	0 / 6.200	4 / 0.000	0 / 0.000	4 / 0.000	4 / 6.800	- / -	- / -	- / -	0 / 0.000	8 / 13.000

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	**Modification Number / Title:** 1 / Conventional Prompt Strike
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 2 of 2: Conventional Prompt Strike - Advanced Payload Modules

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Manassas, Virginia
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 30

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Oct 2022	Oct 2023	Oct 2024	Oct 2025		
Delivery Dates		May 2025	May 2026	May 2027	May 2028		

Installation Information

Method of Implementation: BYMP and WOO's:: Installation Name: CPS - Advanced Payload Modules

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.500	- / -	- / -	- / -	2 / 0.000	- / -	- / -	- / -	0 / 0.000	2 / 0.500
FY 2024	- / -	- / -	- / -	0 / 0.750	0 / 0.000	0 / 0.750	- / -	2 / 0.000	1 / 0.000	- / -	0 / 0.000	3 / 0.750
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.250	- / -	3 / 0.000	2 / 0.000	0 / 0.000	5 / 1.250
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.500	- / -	2 / 0.000	0 / 0.000	2 / 0.500
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	0 / 0.500	0 / 0.750	0 / 0.000	0 / 0.750	2 / 1.250	2 / 0.500	4 / 0.000	4 / 0.000	0 / 0.000	12 / 3.000

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	1	-	1	2	2	-	1	1	-	12
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	1	-	1	2	2	-	1	1	-	12

Footnotes:

(4) DDG 1000 Rubber Boots, Shock Isolation, Hatches- FY23 Procurement and Installation funding. DDG 1001 Rubber Boots, Shock Isolation, Hatches- FY25 Procurement and Installation funding. Installation funding is budgeted in the year of the BYMP contract award.

(5) DDG 1000 Tubes Procured in FY22 and installation funding is budgeted in FY23 to align with BYMP contract award in FY23. DDG 1001 Tubes Procured in FY23 and installation funding is budgeted in FY25 to align with BYMP contract in FY25. DDG 1002 Tubes will be procured with SCN funding in FY24.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment	**Modification Number / Title:** 1 / Conventional Prompt Strike
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(6) HM&E Government furnished materials (GFM) and Industrial Activity Furnished Materials required to support CPS integration.

(7) Installation funding is budgeted in the year of the BYMP contract award.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0950 / Strategic Platform Support Equip

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	174.592	12.256	13.504	25.058	0.000	25.058	18.110	20.438	20.133	24.277	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	174.592	12.256	13.504	25.058	0.000	25.058	18.110	20.438	20.133	24.277	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**174.592**	**12.256**	**13.504**	**25.058**	**0.000**	**25.058**	**18.110**	**20.438**	**20.133**	**24.277**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funding in this P-1 line provides for the procurement of tactical Hull, Mechanical and Electrical (HM&E) equipment that will be installed aboard ships and in the facilities at the TRIDENT Refit Facility (TRF), Navy Intermediate Maintenance Facility (IMF) and TRIDENT Training Facility (TTF). TRF and Navy IMF are dedicated shore support facilities providing a full range of industrial support. TTF provides realistic training experience in operating and maintaining shipboard equipment for the OHIO Class (SSBN/SSGN) Submarines crews. SSBN/SSGN Submarines operate with two separate crews and TTF is critical in maintaining proficiency and certification for continued at-sea operations when not underway.

The magnitude of this funding line is driven by the operational need for modernization and safety alterations. Increased funding in FY24 is supports procurement and installation of three critical HM&E modifications. Ventilation & Alarm Monitoring Panel (VAMP) MOD 3 modernization is required for procurement and installation of a new navigation system, Missile Compartment Thermal Event (MCTE) modernization is a series of fire safety alterations, and Submarine Life Support System procures Low Pressure Electrolyzer (LPE) oxygen generators fulfills the Program of Record requirement to replace the legacy obsolete high pressure Electrolytic Oxygen Generator (EOG) on SSBNs. LPE is critical to extend OHIO Class service life to 42 years with procurements tied to specific submarine availabilities since a major ship alteration is required for installation.

[P40A / HH009 EQUIPMENT HM&E & SWS/SS ALTERATION]: This provides for the replacement of obsolete equipment to maintain or increase mission capabilities, replacement/modification of equipment identified as unreliable to reduce fleet maintenance, or correct safety items on board OHIO Class Submarines and at dedicated Shore Support Facilities. This line provides equipment procurement and installation, technical planning, training, and associated resources.

[P40A / SCS PY SHIPALT DEV]: Ship Control System (SCS) resolves interoperability issues and provides periodic system upgrades to mitigate obsolescence.

[P40A / SWSS (VAMP MOD 3)]: SSBN Strategic Weapon Support Systems (SWSS) program maintains the SWSS surveillance, modernization and obsolescence management program. This line monitors and predicts SWSS obsolescence issues and plans for program modernization to ensure OHIO class submarines continue to meet mission requirements until replaced by the COLUMBIA Class. Items anticipated may include; Harvesting Critical Components, Reverse Engineering, Form-Fit-Function replacements, providing lifetime buys, providing component-level SHIPALTs (reactive). This includes the development of SWSS Ventilation and Alarm Monitoring Panel(VAMP) MOD 3 solution, which modernizes the equipment to ensure the SWSS program continues to effectively function.

[P40A / Ohio Class HM&E Modernization]: OHIO Class HM&E Modernization provides funding for initial cost estimates and planning as well as resolve safety, obsolescence, and interoperability issues for lower cost efforts that will not be tracked independently. Previous budget cycles have prioritized funding away from this line to other HM&E modernization efforts resulting in a growing backlog.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0950 / Strategic Platform Support Equip	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / Missile Compartment Thermal Event (MCTE)]: Missile Compartment Thermal Event (MCTE), commences in FY24, providing for non-recurring engineering (NRE) and alternation (ALT) development, installation material, and installation of equipment (lockers, detectors, cabling) and structural/system modification (bulkheads, piping, valves). Alteration mitigates a high-risk vulnerability identified on strategic assets by providing defense-in-depth (preventing a fire, detecting a fire, containing a fire, suppressing a fire, extinguishing a fire, and slowing the heat transfer to the Missile Tubes).

[P40A / Heat and Smoke Detection Annunciator Network (HASDAN)]: HASDAN modernization resolves a high-risk vulnerability noted for OHIO Class strategic weapons system spaces to detect and respond to a major fire in a low manning condition (i.e. refit or overhaul) situation. An installed fire detection system alleviates this vulnerability by allowing for rapid recognition and response to a fire casualty. Investment in this modernizations will mitigate production/manning costs to establish/disestablish temporary systems during repair/modernization periods.

[P40A / Life Support System (LPE) Procurement]: The Submarine Life Support System provides necessary design/development, procurement, and installation efforts to address required modernization changes to the Submarine Life Support Systems. Oxygen Generators are necessary for life support and to maintain submarine stealth while on mission. This funding currently funds replacement of the Electrolytic Oxygen Generator (EOG) with a Low Pressure Electroyzer (LPE) on both SSBN and SSGN submarines. The LPE produces oxygen at low pressure, eliminating the need for high pressure oxygen storage. There will be two LPEs on each SSBN/SSGN Class submarine. EOG's must be replaced by LPE's on OHIO SSBNs to ensure they can sustain current operational availability requirements through their 42 yr service life. Therefore, procurements are driven by the OHIO Class maintenance period schedule. The replacement of the EOG with the LPE must be done during a major maintenance availability due to the time to complete the installation. Future efforts will include design and development efforts for the Central Atmosphere Monitoring System (CAMS) sustainment for SSGN/BN classes.

[P40A / HH012 EQUIPMENT HM&E TRIDENT ENGINGEERING AVAILABILITY]: TRIDENT Engineered Availability (EA) support funding is required to provide system engineering, technical, logistic and configuration management support for all accomplished modernization during the SSBN 726 Class Submarine Engineered Availabilities (EAs). This program also provides funding for Quality Assurance (QA) oversight and certification by Supervisor Of Shipbuilding, Groton (SOS Groton) of SHIPALTS performed by Electric Boat Corporation (EB), provides funding to the Planning Yard for Configuration Record change and Liaison Action Request processing, and Selected Record Drawings mark ups for SHIPALT-related work, accomplishment of availability work package requirements assigned to the Planning Yard such as Design Review hanger inspections, Integrated Logistic Support product updates, and Configuration Overhaul Planning Product development and distribution for each availability. The program also provides funding for NUWC Newport system-level final end-to-end certification test development and onboard test conduct and analysis to support end of CNO availability certification of entire Command and Control system as ready for sea and strategic deployment. This system-level engineering support is provided during Engineered Refueling Overhauls (ERO), Extended Refit Periods (ERPs), and Maintenance & Modernization Periods (MMPs).

[P40A / HH0GN SSGN MODIFICATIONS]: Provides for procurement of SSGN unique system components that will be installed during planned modernization periods. Also provides funding to perform integrated testing of these unique systems to ensure satisfactory operation with other HM&E and Combat Systems. Funds are provided for procurement of Submarine Special Operations Forces (SOF) unique system components that will be installed during planned modernization periods. Starting in FY22, all funding for SOF transferred to BLI 0941.

[P40A / SOF HH0GN]: Funds are provided for installation of Submarine Special Operations Forces (SOF) unique system components. Starting in FY22, all funding for SOF transferred to BLI 0941.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0950 / Strategic Platform Support Equip

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	Strategic Platform Support Equip				- / 127.586	- / 10.842	- / 13.504	- / 25.058	- / -	- / 25.058
P-3a	1 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC (TBD)				- / 47.006	- / 1.414	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 174.592**	**- / 12.256**	**- / 13.504**	**- / 25.058**	**- / 0.000**	**- / 25.058**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	Strategic Platform Support Equip				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 48.420
P-40	**Total Gross/Weapon System Cost**				**- / 18.110**	**- / 20.438**	**- / 20.133**	**- / 24.277**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

Beginning in FY24, Missile Compartment Thermal Event (MCTE) Modernization commences providing for NRE and ALT development, installation material, and installation of equipment (lockes, detectors, cabling) and structural/system modification (bulkheads, piping, valves) to support installation.

Increased funding in FY24 supports procurement and installation of three critical HM&E modifications. The Ventilation & Alarm Monitoring Panel (VAMP Obsolete Equipment Replacement (OER) and VAMP) MOD 1 Strategic Weapon Support Systems (SWSS) System requires modernization including procurement and installation. This update is required to address SSI INC 8 compatibility issues and addresses obsolescence and material availability issues. Converting the VAMP M3 to a full digital system and leveraging sensors that will be used in the COLUMBIA design will reduce cost and future obsolescence with VAMP MOD 3. Funding provides engineering to resolve obsolescence after alternative means have been explored without suitable results.

FY24 funding supports the procurement for Life Support Systems Low Pressure Electrolyzer (LPE). The LPE is critical to the OHIO Class to achieve service life extension. Procurements are tied to specific submarine availabilities since a major ship alteration is required for installation. LPE will replace the Electrolytic Oxygen Generator (EOG) currently being used on SSBN/SSGN Class submarines. The LPE produces oxygen at low pressure, eliminating the need for high pressure oxygen storage. There will be two LPEs on each SSBN/SSGN Class submarine. EOG's must be replaced by LPE's on OHIO SSBNs to ensure they can sustain current operational availability requirements through their 42-yr service life.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0950 / Strategic Platform Support Equip	**Aggregated Items Title:** Strategic Platform Support Equip

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) HH009 EQUIPMENT HM&E & SWS/SS ALTERATION																				
1.1) SCS PY SHIPALT DEV	A		-	-	40.172	-	-	-	-	-	0.835	-	-	1.210	-	-	-	-	-	1.210
1.2) Ship Control Station OER Material	A		-	-	5.356	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) SCS OER Lab/ TTF Equip Upgrade	A		-	-	7.522	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) SWSS (VAMP MOD 3) (1)	A		-	-	-	-	-	2.499	-	-	2.912	-	-	6.222	-	-	-	-	-	6.222
1.5) SWSS (VAMP MOD 3) Installation	A		-	-	-	-	-	-	-	-	-	-	-	2.000	-	-	-	-	-	2.000
1.6) SWSS Sustainability	A		-	-	2.907	-	-	1.008	-	-	1.533	-	-	1.609	-	-	-	-	-	1.609
1.7) Ohio Class Trim/ Drain Pump Motor Replacement	A		-	-	1.625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.8) Ohio Class High Pressure Air Compressor Controllers	A		-	-	2.462	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.9) Ohio Class HM&E Modernization (2)	A		-	-	-	-	-	-	-	-	-	-	-	1.932	-	-	-	-	-	1.932
1.10) Missile Compartment Thermal Event (MCTE)	A		-	-	-	-	-	-	-	-	-	-	-	1.592	-	-	-	-	-	1.592
1.11) Missile Compartment Thermal Event (MCTE) Installation	A		-	-	-	-	-	-	-	-	-	-	-	0.831	-	-	-	-	-	0.831
1.12) Heat and Smoke Detection Annunciator Network (HASDAN) (3)	A		-	-	-	-	-	1.439	-	-	2.808	-	-	2.862	-	-	-	-	-	2.862
1.13) Life Support System (LPE) Procurement (4)	A		-	-	-	-	-	-	-	-	-	-	-	4.100	-	-	-	-	-	4.100
1.14) Life Support Systems (Design & Development) (5)	A		-	-	-	-	-	3.598	-	-	2.968	-	-	-	-	-	-	-	-	-
1.15) Life Support System (LPE) Installation	A		-	-	-	-	-	1.083	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) HH009 EQUIPMENT HM&E & SWS/SS ALTERATION			**-**	**-**	***60.044***	**-**	**-**	***9.627***	**-**	**-**	***11.056***	**-**	**-**	***22.358***	**-**	**-**	**-**	**-**	**-**	***22.358***
2) HH012 EQUIPMENT HM&E TRIDENT ENGINGEERING AVAILABILITY																				

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip	Aggregated Items Title: Strategic Platform Support Equip

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
2.1) SHIPALT INSTALLATION AND ENGINEERING SERVICES (6)	A		-	-	23.351	-	-	0.510	-	-	1.028	-	-	1.134	-	-	-	-	-	1.134
2.2) CCS EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING	A		-	-	19.580	-	-	0.413	-	-	0.832	-	-	0.918	-	-	-	-	-	0.918
2.3) HM&E EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING	A		-	-	13.007	-	-	0.292	-	-	0.588	-	-	0.648	-	-	-	-	-	0.648
Subtotal: 2) HH012 EQUIPMENT HM&E TRIDENT ENGINGEERING AVAILABILITY			**-**	**-**	***55.938***	**-**	**-**	***1.215***	**-**	**-**	***2.448***	**-**	**-**	***2.700***	**-**	**-**	**-**	**-**	**-**	***2.700***
3) HH0GN SSGN MODIFICATIONS																				
3.1) SOF UPGRADES	A		-	-	6.095	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) HH0GN SSGN MODIFICATIONS			**-**	**-**	***6.095***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) SOF HH0GN																				
4.1) SOF ALTS	A		-	-	5.509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) SOF HH0GN			**-**	**-**	***5.509***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**127.586**	**-**	**-**	**10.842**	**-**	**-**	**13.504**	**-**	**-**	**25.058**	**-**	**-**	**-**	**-**	**-**	**25.058**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) Development of SWSS VAMP MOD 3 solution is required to modernize the equipment to ensure the SWSS program continues to effectively function with the boat's Technical Insertion (TI) platform as it is upgraded by Submarine Warfare Federated Tactical System (SWFTS). If not modernized, the new SWSS equipment will not function properly.

(2) Starting in FY24, funds provide solution development for underperforming systems or obsolete parts with no commercially available alternatives. This includes several known safety issues on OHIO Class submarines. Modernizations targeted in this line specifically address reliability and risk reduction on systems which have negatively impacted SSBN Ao.

(3) Following the USS MIAMI fire, a high-risk vulnerability assessment was conducted on the ability to detect and respond to a major fire, within OHIO Class strategic weapons system spaces, in a low manning condition (i.e. refit or overhaul). A permanently installed fire detection system was identified to partially mitigate this vulnerability by allowing for rapid recognition and response to a fire casualty as well as eliminate production/manning costs to establish/disestablish temporary systems during repair/modernization periods.

(4) LPE unit orders are timed to support installations during a long refit. Installations are also aligned when current oxygen generators would receive required replacement of cells which are necessary for continued operation of legacy oxygen generators, thus avoiding an approximate $2M/ship additional maintenance cost. Funding supports procurement of Low Pressure Electrolyzers (LPEs) on OHIO Class submarines for two (2) procurements in FY24 and two (2) in FY26 to coincide with availability schedules. Install in FY24 supports previously procured in FY22 with an 18-month lead time. Each OHCL boat requires 2 LPEs.

(5) Submarine Life Support Systems design and development supports efforts for Central Atmospheric Monitoring System (CAMS), Diesel Exhaust, Electro Oxygen Generators (EOG), Automatic Electro-Oxygen Generators (AEOG), Oxygen Concentration (SAROS), other oxygen generators (ILPE, AILPE, LPE), CO2 Scrubbers, and Burners. Each OHCL boat requires 2 LPEs. Each LPE has an 18 month lead time for procurement. FY24 has no cost due to the 18 month lead time for procurement not falling within FY24.

(6) Beginning in FY22, significant effort to drive down the backlog of necessary updates for Configuration Record changes, Liaison Action Request processing, Selected Drawings (SRD) mark-ups for SHIPALT-related work, accomplishment of Availability work packages (AWP) requirements assigned to the Planning Yard, such as Design Review hanger inspections, Integrated Logistic Support product updates, and Configuration Overhaul Planning Product development for each

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0950 / Strategic Platform Support Equip	**Aggregated Items Title:** Strategic Platform Support Equip

availability (ERP/ERO). This paperwork, which started to significantly backlog in the last few years, is vital to properly sustaining each Strategic boat by ensuring clear and accurate as-built configuration control of capabilities installed in each hull, as well as to execute expedient new development and incorporation of new technology onboard these Strategic platform.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0950 / Strategic Platform Support Equip	**Modification Number / Title:** 1 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	47.006	1.414	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	48.420
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	47.006	1.414	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	48.420
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**47.006**	**1.414**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**48.420**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

SSBN Ship Control Obsolete Equipment Replacement - Perform multiple efforts to ensure that the OHIO Class Ship Control Subsystem, both hardware and software components, support the extended life of the OHIO Class submarine platforms.

Note: Production lead-time for Ship Control System OER is 17 months.

[EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC] Installations of this SHIPALT are accomplished during SSBN refits, SSBN Extended Refit Periods (ERP), SSGN Major Maintenance Periods (MMP), and SSBN Engineered Refueling Overhauls (ERO). Installations do not complete until the availability completes. Thus the installation duration ranges from 90 days for refit installations to 821 days for ERO installations. By design, Ship Control ShipAlt TRID 588B is conjunctive with SSBN Modernization ShipAlt TRID601, which upgrades SSBNs to TI-16 sonar/fire control systems.

[SCS SSBN/SSGN INSTALLATION DSA] DSA costs vary due to the number of installations, location and type of installation, e.g. ship or facility.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0950 / Strategic Platform Support Equip	**Modification Number / Title:** 1 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC												
B Kits												
Recurring												
1.1.1) EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC - NonOrganic	18 / 23.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 23.225
1.1.2) SCS SSBN/SSGN INSTALLATION DSA - NonOrganic	- / 1.356	- / 0.075	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.431
Subtotal: Recurring	*- / 24.581*	*- / 0.075*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 24.656*
Subtotal: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC	*18 / 24.581*	*- / 0.075*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*18 / 24.656*
Subtotal: Procurement, All Modification Items	*- / 24.581*	*- / 0.075*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 24.656*
Installation												
Modification Item 1 of 1: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC	- / 22.425	- / 1.339	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 23.764
Subtotal: Installation	*- / 22.425*	*- / 1.339*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 23.764*
Total												
Total Cost (Procurement + Support + Installation)	**47.006**	**1.414**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**48.420**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0950 / Strategic Platform Support Equip	**Modification Number / Title:** 1 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	17 / 22.425	1 / 1.339	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	18 / 23.764
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	17 / 22.425	1 / 1.339	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	18 / 23.764

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	17	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Out	16	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0955 / Deep Subm Sys Proj (DSSP) Equip

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	57.472	3.282	3.660	4.623	0.000	4.623	4.589	5.876	7.198	5.944	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	57.472	3.282	3.660	4.623	0.000	4.623	4.589	5.876	7.198	5.944	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**57.472**	**3.282**	**3.660**	**4.623**	**0.000**	**4.623**	**4.589**	**5.876**	**7.198**	**5.944**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Undersea Special Mission Systems Program, formerly Deep Submergence Systems Program (DSSP), is responsible for the procurement, life cycle support, improvement and modernization of assigned platforms and programs. The Undersea Special Missions Systems Program provides for the procurement of equipment to support the establishment and maintenance of fleet capability for a number of programs which perform submarine rescue, escape, search, inspection, and object location and retrieval from the ocean environment. Submarine escape and rescue procurements replace obsolete, non-supportable equipment and subsystems through phased improvement and modernization projects. These projects may include special ship alterations, field change kits, and design corrections.

FY2024 increase is required by the Navy in order to provide a credible U.S. Submarine Rescue System (SRS) for our sailors and ally partner nations. As part of detailed review, Navy determined the system had not been funded sufficiently to properly maintain the system and FY24 budget increase is to support this. Funding provides modernization of special mission systems to include the Navy's only SRS assets. Modernization of SRS is required to address known reliability and obsolescence issues and support the planned minimum 15 year system service life extension prior to SRS's end of life and inoperability.

SOURCES: The sources for these acquisitions are limited. There are few private companies actively engaged in deep ocean engineering and even fewer with the specialized certifications, experience, knowledge, and facilities to meet the exacting requirements of submarine escape and rescue. Accordingly, sole source contracts are sometimes required; however, where possible, contracting via open competition is utilized.

[P40A / HJ030 - RESCUE SUPPORT EQUIPMENT]: INTERVENTION SYSTEMS (REMOTELY OPERATED VEHICLE (ROV)/SRS/SUBMARINE RESCUE CHAMBER (SRC) Intervention assets (ROV) are required to support the SRS and SRC world-wide rescue capability mission. Intervention assets are used to clear disabled submarine's seating surfaces, attach the SRC downhaul cable, attach salvage fittings, deliver emergency life support stores, and assess distressed submarines. The ROV is an unmanned system that reduces operational risk from the previous Intervention Assets that were a manned system, Atmospheric Diving System (ADS); transition from ADS to ROV has occurred and is in-service. SRC provides shallow water un-pressurized rescue capability. SRS is the deep water pressurized rescue ready system for the U.S. Navy. SRS was delivered in increments; the Submarine Rescue System-Rescue Capable System (SRS-RCS) completed OPEVAL in FY08, and the final component of SRS was the Transfer Under Pressure (TUP) or Submarine Rescue System-Submarine Decompression System (SRS-SDS) which has been delivered and completed Initial Operating Capability (IOC)/Final Operating Capability (FOC) in FY2019.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0955 / Deep Subm Sys Proj (DSSP) Equip

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Deep Subm Sys Proj (DSSP) Equip				- / 57.472	- / 3.282	- / 3.660	- / 4.623	- / -	- / 4.623
P-40	**Total Gross/Weapon System Cost**				**- / 57.472**	**- / 3.282**	**- / 3.660**	**- / 4.623**	**- / 0.000**	**- / 4.623**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2024 funding is for the U.S. Submarine Rescue System (SRS) modernization and upgrade. Funding levels required in order to meet fleet wholeness requirements for resiliency related to submarine rescue system critical items, sparing, and operational availability and crucial field changes.

Increase in FY 2024 over FY 2023: Navy added additional resources to FY2024 to provide a credible SRS for our sailors and ally partner nations. Funding provides modernization of special mission systems to include the Navy's only SRS assets. Modernization of SRS is required to address known reliability and obsolescence issues and support the planned minimum 15 year system service life extension prior to SRS's end of life and inoperability.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0955 / Deep Subm Sys Proj (DSSP) Equip	**Aggregated Items Title:** Deep Subm Sys Proj (DSSP) Equip

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) HJ030 - RESCUE SUPPORT EQUIPMENT																				
1.1) SRC Materials	A		-	-	4.464	-	-	0.287	-	-	0.293	-	-	0.299	-	-	-	-	-	0.299
1.2) SRS Modernization and Upgrade Spares	A		-	-	53.008	-	-	2.995	-	-	3.367	-	-	4.324	-	-	-	-	-	4.324
Subtotal: 1) HJ030 - RESCUE SUPPORT EQUIPMENT			**-**	**-**	***57.472***	**-**	**-**	***3.282***	**-**	**-**	***3.660***	**-**	**-**	***4.623***	**-**	**-**	**-**	**-**	**-**	***4.623***
Total			**-**	**-**	**57.472**	**-**	**-**	**3.282**	**-**	**-**	**3.660**	**-**	**-**	**4.623**	**-**	**-**	**-**	**-**	**-**	**4.623**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0960 / CG Modernization

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3,739.003	138.926	59.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	3,936.983
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3,739.003	138.926	59.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	3,936.983
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3,739.003**	**138.926**	**59.054**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**3,936.983**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.429	0.129	-	-	-	-	-	-	-	-	0.558
Flyaway Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2024 budget reflects program sun-setting after FY23.

The CG Modernization Program enhances Anti-Air Warfare (AAW) and C4I through numerous system improvements (CEC, SPY, and AEGIS Weapon System (AWS)); enhances Gun Weapon System capability (5"/62 Caliber Gun Mounts, Naval Fires Upgrades: Optical Sight and MK160 Fire Control System); improves force protection/layered defense (Evolved Sea Sparrow Missile (ESSM), CIWS BLK IB, and SPQ-9B (ASMD)); HM&E improvements: All electric modifications, Integrated Bridge Systems (IBS) upgrade, Machinery Control Systems (MCS) upgrades, structural modifications, and quality of life upgrades; maintenance: Structural repairs, periodicity driven maintenance and repair maintenance.

[P40A / CC013- INSTALLATION /DSA / AIT]: Provides Planning Yard Design Services Allocation (DSA) (design, advance planning, and kitted material), MSR installations and AIT installation support (ILS).

[P40A / CC014 - CONJUNCTIVE COMBAT SYSTEM ALTERATIONS]: Conjunctive Combat System Alterations includes design integration, equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics Support.

[P40A / CC015- MULTI-MISSION SIGPRO]: Procures Multi-Mission Signal Processor (MMSP) including equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics Support (ILS) products for Ticonderoga Class Ships.

[P40A / CC016- SPY-1B VARIANCE TRANSMITTER UPGRADES]: Provides upgrades to the existing Radio Frequency Monitor (RFM), existing Driver/Pre-Driver (DPD) and modifies existing Deckhouse Wave Guide for Ticonderoga Class Ships.

[P3A / CC001 - SPQ-9B UPGRADE]: Procures SPQ-9B for all CG Modernization ships including equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics.

[P3A - 2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)]: Procures Cooperative Engagement Capability (CEC) that includes equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics Support (ILS) for anti-air capabilities on Ticonderoga Class Ships.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0960 / CG Modernization	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P3A - 3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT]: Procures AN/SQQ-89 A(V) 15 with Multi-Function Towed Array (MFTA) combat systems to replace the installed MIL-STD AN/SQQ-89(V) for Baseline 3 and 4 Ticonderoga Class ships including equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics Support (ILS).

[P3A - 4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT]: Procures AEGIS Weapons System (AWS) upgrade for Ticonderoga Class Ships including equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics Support (ILS).

[P3A - 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)]: Procures Vertical Launch System (VLS) Modifications, Evolved Sea Sparrow Missile VLS Modifications, SM3 Operability Heating Ventilation Air Conditioning (HVAC) and VLS MODS for SM3 Block 3 combat systems for Ticonderoga Class Ships including equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics Support (ILS).

[P3A - 6 / CC010 - MK34 UPGRADE]: Procures MK34 Gun Weapon System (GWS) upgrade for Ticonderoga Class Ships including equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics Support (ILS).

[P3A - 7 / CC011 - INTEGRATED SHIP CONTROLS (ISC)]: Procures Smartship Integrated Ship Controls (ISC) for all ships requiring upgrade including equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics Support (ILS).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0960 / CG Modernization

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	CG Modernization				- / 1,601.143	- / 112.764	- / 59.054	- / -	- / -	- / -
P-3a	1 / CC001 - SPQ-9B UPGRADE (TBD)				- / 186.566	- / 1.168	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC) (TBD)				- / 142.913	- / 1.378	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT (TBD)				- / 311.260	- / 2.039	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT (TBD)				- / 855.267	- / 9.294	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS) (TBD)				- / 253.286	- / 0.500	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	6 / CC010 - MK34 UPGRADE (TBD)				- / 206.718	- / 2.750	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	7 / CC011 - INTEGRATED SHIP CONTROLS (ISC) (TBD)				- / 181.850	- / 9.033	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 3,739.003**	**- / 138.926**	**- / 59.054**	**- / 0.000**	**- / 0.000**	**- / 0.000**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	CG Modernization				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / CC001 - SPQ-9B UPGRADE (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 187.734
P-3a	2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 144.291
P-3a	3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 313.299
P-3a	4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 864.561
P-3a	5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 253.786
P-3a	6 / CC010 - MK34 UPGRADE (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 209.468
P-3a	7 / CC011 - INTEGRATED SHIP CONTROLS (ISC) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 190.883
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 3,936.983**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Decrease in costs from FY23 to FY24 due to program sun-setting after FY23.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Aggregated Items Title: CG Modernization

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)
1) CC002 - SARTIS																				
1.1) SARTIS EQUIPMENT	A		227.091	11	2.498	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) CC002 - SARTIS			**-**	**-**	***2.498***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) CC005 - SGS/CDLMS																				
2.1) SGS/CDLMS EQUIPMENT	A		820.143	7	5.741	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) SGS/CDLMS ENGINEERING SERVICES	A		-	-	0.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) CC005 - SGS/CDLMS			**-**	**-**	***6.441***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) CC012 - VIRGINIA SITES																				
3.1) VIRGINIA SITES	A		-	-	82.028	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) CC012 - VIRGINIA SITES			**-**	**-**	***82.028***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) CC013 - INSTALLATION / DSA / AIT																				
4.1) CC013- INSTALLATION / DSA / AIT	A		-	-	856.879	-	-	112.764	-	-	59.054	-	-	-	-	-	-	-	-	-
Subtotal: 4) CC013 - INSTALLATION / DSA / AIT			**-**	**-**	***856.879***	**-**	**-**	***112.764***	**-**	**-**	***59.054***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) CC014 - CONJUNCTIVE COMBAT SYSTEM ALTERATIONS																				
5.1) CONJUNCTIVE COMBAT SYSTEM ALTERATION EQUIPMENT	A		137,109.250	4	548.437	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) CC014 - CONJUNCTIVE COMBAT SYSTEM ALTERATIONS			**-**	**-**	***548.437***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
6) CC017 - MULTI-MISSION BMD CAPABILITIES																				
6.1) MULTI-MISSION BMD CAPABILITIES EQUIPMENT	A		1,553.333	3	4.660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) CC017 - MULTI-MISSION BMD CAPABILITIES			**-**	**-**	***4.660***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
7) CC018 - MULTI-MISSION SSA/CWI MICROWAVE TUBES																				
7.1) MULTI-MISSION SSA/CWI MICROWAVE TUBE EQUIPMENT	A		1,140.000	3	3.420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) CC018 - MULTI-MISSION SSA/CWI MICROWAVE TUBES			**-**	**-**	***3.420***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
8) CC015- MULTI-MISSION SIGPRO																				
8.1) CC015- MULTI-MISSION SIGPRO	A		-	-	66.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Aggregated Items Title: CG Modernization

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)
Subtotal: 8) CC015- MULTI-MISSION SIGPRO			**-**	**-**	***66.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
9) CC016-SPY-1B VARIANCE TRANSMITTER UPGRADES																				
9.1) CC016-SPY-1B VARIANCE TRANSMITTER UPGRADES	A		-	-	30.780	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 9) CC016-SPY-1B VARIANCE TRANSMITTER UPGRADES			**-**	**-**	***30.780***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**1,601.143**	**-**	**-**	**112.764**	**-**	**-**	**59.054**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 1 / CC001 - SPQ-9B UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	186.566	1.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	187.734
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	186.566	1.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	187.734
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**186.566**	**1.168**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**187.734**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Replaces the existing AN/SPQ-9A heavyweight (HW) Radar Set with the AN/SPQ-9B lightweight (LW) Radar Set. Supports associated DSA and Planning for installation.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 1 / CC001 - SPQ-9B UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CC001 - SPQ-9B UPGRADE												
B Kits												
Recurring												
1.1.1) CC001 - SPQ-9B EQUIPMENT - NonOrganic	17 / 156.352	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 156.352
Subtotal: Recurring	*- / 156.352*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 156.352*
Subtotal: CC001 - SPQ-9B UPGRADE	*17 / 156.352*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*17 / 156.352*
Subtotal: Procurement, All Modification Items	*- / 156.352*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 156.352*
Installation												
Modification Item 1 of 1: CC001 - SPQ-9B UPGRADE	- / 30.214	- / 1.168	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 31.382
Subtotal: Installation	*- / 30.214*	*- / 1.168*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 31.382*
Total												
Total Cost (Procurement + Support + Installation)	**186.566**	**1.168**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**187.734**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 1 / CC001 - SPQ-9B UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: CC001 - SPQ-9B UPGRADE

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP.	Manufacturer Location: Melville, New York
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC001 - SPQ-9B EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 30.214	1 / 1.168	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 31.382
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 30.214	1 / 1.168	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 31.382

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	11	2	2	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	142.913	1.378	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	144.291
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	142.913	1.378	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	144.291
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**142.913**	**1.378**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**144.291**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Procure and install Cooperative Engagement Capability (CEC). Supports DSA and Planning for installation.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)												
B Kits												
Recurring												
1.1.1) CC003 - CEC EQUIPMENT - NonOrganic [1]	17 / 102.789	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 102.789
1.1.2) CC003 - CEC ENGINEERING SERVICES - NonOrganic	- / 9.708	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.708
Subtotal: Recurring	*- / 112.497*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 112.497*
Subtotal: CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)	*17 / 112.497*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*17 / 112.497*
Subtotal: Procurement, All Modification Items	*- / 112.497*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 112.497*
Installation												
Modification Item 1 of 1: CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)	- / 30.416	- / 1.378	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 31.794
Subtotal: Installation	*- / 30.416*	*- / 1.378*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 31.794*
Total												
Total Cost (Procurement + Support + Installation)	**142.913**	**1.378**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**144.291**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)

Manufacturer Information

Manufacturer Name: RAYTHEON | Manufacturer Location: ST. PETERSBURG, FL

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC003 - CEC EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 30.416	1 / 1.378	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 31.794
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 30.416	1 / 1.378	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 31.794

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	11	2	2	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17

Footnotes:

(1) CG Modernization Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs vary depending on current port rates. Port rates are

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	311.260	2.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	313.299
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	311.260	2.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	313.299
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**311.260**	**2.039**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**313.299**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Procure and Install AN/SQQ-89 A(V) 15 for CG Modernization.

[CC004 - AN/SQQ-89 A(V) 15 EQUIPMENT]

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT												
B Kits												
Recurring												
1.1.1) CC004 - AN/SQQ-89 A(V) 15 EQUIPMENT - NonOrganic (2)	17 / 232.066	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 232.066
1.1.2) CC004 - AN/SQQ-89 A(V) 15 ENGINEERING SERVICES - NonOrganic	- / 48.255	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 48.255
Subtotal: Recurring	*- / 280.321*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 280.321*
Subtotal: CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT	*17 / 280.321*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*17 / 280.321*
Subtotal: Procurement, All Modification Items	*- / 280.321*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 280.321*
Installation												
Modification Item 1 of 1: CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT	- / 30.939	- / 2.039	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 32.978
Subtotal: Installation	*- / 30.939*	*- / 2.039*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 32.978*
Total												
Total Cost (Procurement + Support + Installation)	**311.260**	**2.039**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**313.299**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN | Manufacturer Location: SYRACUSE, NY

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC004 - AN/SQQ-89 A(V) 15 EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 30.939	1 / 2.039	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 32.978
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 30.939	1 / 2.039	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 32.978

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	11	2	2	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17

Footnotes:

(2) CG Modernization Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs may vary depending on current port rates. Port rates

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	855.267	9.294	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	864.561
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	855.267	9.294	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	864.561
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**855.267**	**9.294**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**864.561**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Provides improved computing and display capabilities, faster processing, and greater track capacity. Supports DSA and Planning for installation.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT												
B Kits												
Recurring												
1.1.1) CC007 - AWS EQUIPMENT - NonOrganic (3)	17 / 540.440	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 540.440
1.1.2) CC007 - AWS ENGINEERING SERVICES - NonOrganic	- / 46.167	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 46.167
Subtotal: Recurring	*- / 586.607*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 586.607*
Subtotal: CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT	*17 / 586.607*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*17 / 586.607*
Subtotal: Procurement, All Modification Items	*- / 586.607*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 586.607*
Installation												
Modification Item 1 of 1: CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT	- / 268.660	- / 9.294	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 277.954
Subtotal: Installation	*- / 268.660*	*- / 9.294*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 277.954*
Total												
Total Cost (Procurement + Support + Installation)	**855.267**	**9.294**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**864.561**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: SYRACUSE, NY
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC007 - AWS EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 268.660	1 / 9.294	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 277.954
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 268.660	1 / 9.294	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 277.954

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	11	2	2	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17

Footnotes:

(3) CG Modernization Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs may vary depending on current port rates. Port rates

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	253.286	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	253.786
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	253.286	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	253.786
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**253.286**	**0.500**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**253.786**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Provides VLS upgrades one module forward and one module aft to support evolved sea sparrow missile system capability.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CC008 - VERTICAL LAUNCH SYSTEM (VLS)												
B Kits												
Recurring												
1.1.1) CC008 - VLS EQUIPMENT - NonOrganic [4]	17 / 225.756	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 225.756
1.1.2) CC008 - VLS ENGINEERING SERVICES - Organic	- / 8.829	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.829
Subtotal: Recurring	*- / 234.585*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 234.585*
Subtotal: CC008 - VERTICAL LAUNCH SYSTEM (VLS)	*17 / 234.585*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*17 / 234.585*
Subtotal: Procurement, All Modification Items	*- / 234.585*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 234.585*
Installation												
Modification Item 1 of 1: CC008 - VERTICAL LAUNCH SYSTEM (VLS)	- / 18.701	- / 0.500	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 19.201
Subtotal: Installation	*- / 18.701*	*- / 0.500*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 19.201*
Total												
Total Cost (Procurement + Support + Installation)	**253.286**	**0.500**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**253.786**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CC008 - VERTICAL LAUNCH SYSTEM (VLS)

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN | Manufacturer Location: MOORESTOWN, NJ

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC008 - VLS EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 18.701	1 / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 19.201
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 18.701	1 / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 19.201

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	11	2	2	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17

Footnotes:

(4) CG Modernization Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs may vary depending on current port rates. Port rates

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 6 / CC010 - MK34 UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	206.718	2.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	209.468
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	206.718	2.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	209.468
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**206.718**	**2.750**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**209.468**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures the MK34 Mod 4 Gun Weapon System (GWS) to replace the existing MK86 Gun Fire Control System. Supports DSA and Planning for installation.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 6 / CC010 - MK34 UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CC010 - MK34 UPGRADE												
B Kits												
Recurring												
1.1.1) CC010 - MK34 EQUIPMENT - NonOrganic (5)	17 / 126.939	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 126.939
1.1.2) CC010 - MK34 ENGINEERING SERVICES - NonOrganic	- / 23.443	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 23.443
Subtotal: Recurring	*- / 150.382*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 150.382*
Subtotal: CC010 - MK34 UPGRADE	*17 / 150.382*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*17 / 150.382*
Subtotal: Procurement, All Modification Items	*- / 150.382*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 150.382*
Installation												
Modification Item 1 of 1: CC010 - MK34 UPGRADE	- / 56.336	- / 2.750	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 59.086
Subtotal: Installation	*- / 56.336*	*- / 2.750*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 59.086*
Total												
Total Cost (Procurement + Support + Installation)	**206.718**	**2.750**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**209.468**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 6 / CC010 - MK34 UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: CC010 - MK34 UPGRADE

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC010 - MK34 EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 56.336	1 / 2.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 59.086
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 56.336	1 / 2.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 59.086

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	11	2	2	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17

Footnotes:

(5) CG Modernization Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 7 / CC011 - INTEGRATED SHIP CONTROLS (ISC)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	181.850	9.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	190.883
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	181.850	9.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	190.883
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**181.850**	**9.033**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**190.883**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Procure and Install Smartship Integrated Ship Control (ISC) for CG Modernization.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 7 / CC011 - INTEGRATED SHIP CONTROLS (ISC)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CC011 - INTEGRATED SHIP CONTROLS (ISC)												
B Kits												
Recurring												
1.1.1) CC011 - ISC EQUIPMENT - NonOrganic [6]	12 / 83.266	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 83.266
1.1.2) CC011 - ISC ENGINEERING SERVICES - Organic	- / 4.690	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.690
Subtotal: Recurring	*- / 87.956*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 87.956*
Subtotal: CC011 - INTEGRATED SHIP CONTROLS (ISC)	*12 / 87.956*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*12 / 87.956*
Subtotal: Procurement, All Modification Items	*- / 87.956*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 87.956*
Installation												
Modification Item 1 of 1: CC011 - INTEGRATED SHIP CONTROLS (ISC)	- / 93.894	- / 9.033	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 102.927
Subtotal: Installation	*- / 93.894*	*- / 9.033*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 102.927*
Total												
Total Cost (Procurement + Support + Installation)	**181.850**	**9.033**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**190.883**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 7 / CC011 - INTEGRATED SHIP CONTROLS (ISC)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CC011 - INTEGRATED SHIP CONTROLS (ISC)

Manufacturer Information

Manufacturer Name: HENSCHEL	Manufacturer Location: NEWBURY PORT, MA
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC011 - ISC EQUIPMENT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	11 / 93.894	1 / 9.033	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 102.927
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 93.894	1 / 9.033	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 102.927

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	11	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	5	2	3	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Footnotes:

(6) CG Modernization Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). Installation costs may vary depending on current port rates. Port rates

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0960 / CG Modernization	**Modification Number / Title:** 7 / CC011 - INTEGRATED SHIP CONTROLS (ISC)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0970 / LCAC

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	137.885	21.314	17.452	10.794	0.000	10.794	18.253	19.902	20.292	20.730	-	266.622
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	137.885	21.314	17.452	10.794	0.000	10.794	18.253	19.902	20.292	20.730	-	266.622
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**137.885**	**21.314**	**17.452**	**10.794**	**0.000**	**10.794**	**18.253**	**19.902**	**20.292**	**20.730**	**-**	**266.622**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.380	0.885	-	-	-	-	-	-	-	-	1.265
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The LCAC (Landing Craft, Air Cushion), which consists of both the legacy and LCAC 100 classes of craft, mission is to transport weapons systems, equipment, cargo, and personnel of the assault elements for the Marine Air/Ground Task Force from ship to shore and across the beach. The LCAC rides on a cushion of air contained in a flexible skirt and is propelled by two aft-mounted, reversible, variable pitch propellers. It is capable of speeds in excess of 40 knots. The LCAC sustainment funding is programmed for equipment procurement using OPN to replace selected engines, Personnel Transport Modules and other equipment that the fleet urgently requires to maintain acceptable levels of readiness.

The decrease from FY23 to FY24 is due to the reduction of Major Shore Based Spares (MSBS) planned procurement.

LC001 - LCAC SYSTEM UPGRADES
The LCAC System Upgrade Program provides procurement and installation of components required to maintain acceptable levels of fleet operational readiness. LCAC System Upgrade Program will also provide materials to support systems upgrades. Equipment removal and installation will take place at Assault Craft Unit FOUR (ACU 4), ACU 5 and Naval Beach Unit SEVEN (NBU 7). Specific items procured vary from year to year based on Fleet needs; these items include but are not limited to C4N upgrades and deep skirt replacements.

LC002 - ENGINES
The ETF-40B engines are enhanced versions of the current TF-40B engines and are installed on Service Life Extension Program (SLEP) craft. Catastrophic engine failures have highlighted the need for spare engines to reduce operational downtime. Engine procurements are also for Pack Up Kits (PUKs) that accompany fleet deployment of LCACs aboard amphibious ships. Additional ETF-40B Engines will be needed to meet operational needs.

LC007 - LIGHTWEIGHT ARMOR
The portable lightweight armor system replaces the existing armor system. The portable system can be transported via a Container Express (CONEX) box and provides the fleet ballistic/fragmentation protection to manned spaces on the craft as well as to selected machinery components.

LC008 - COLD WEATHER KITS

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0970 / LCAC	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

LCAC requires to be capable of operating in temperature ranges from 10 degrees Fahrenheit to 100 degrees Fahrenheit. In order to operate in weather conditions below 50 degrees Fahrenheit, a cold weather kit is required. Snow and ice accumulation leads to actuation of a safety system that bypasses the main engine inlet air filtration system and allows engines to draw in unfiltered air. Cold weather kits prevent snow and ice accumulation in the main engines during cold weather operations keeping the craft operational during deployments.

LC009 - PERSONNEL TRANSPORT MODULE
The Personnel Transport Module (PTM) provides the capability of the Landing Craft Air Cushion (LCAC) to transport personnel and protect occupants from the elements inherent in an amphibious environment.

LC010 - LCAC 100 CLASS MAJOR SHORE BASED SPARES (Ship to Shore Connector, SSC)
Major Shore Based Spares (MSBS) Spares to be procured beginning in FY22 include major equipment with long lead times including such items as Engines, Skirts, Composites, Auxiliary Power Units, Propellers, Bow and Stern Ramps, Gearboxes, Lift Fan Impellers, and Fuel Pump & Metering Units. First craft arrived at the ACU 4 in FY22.

[P40A / LC001 LCAC SYSTEMS UPGRADE]: The LCAC System Upgrade Program provides procurement and installation of components required to maintain acceptable levels of fleet operational readiness. LCAC System Upgrade Program will also provide materials to support systems upgrades. Equipment removal and installation will take place at Assault Craft Unit FOUR (ACU 4), ACU 5 and Naval Beach Unit SEVEN (NBU 7). Specific items procured vary from year to year based on Fleet needs; these items include but are not limited to C4N upgrades and deep skirt replacements.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0970 / LCAC

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	LCAC				- / 137.885	- / 21.314	- / 17.452	- / 10.794	- / -	- / 10.794
P-40	**Total Gross/Weapon System Cost**				**- / 137.885**	**- / 21.314**	**- / 17.452**	**- / 10.794**	**- / 0.000**	**- / 10.794**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0970 / LCAC	Aggregated Items Title: LCAC

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) LCAC																				
1.1) LC001 LCAC SYSTEMS UPGRADE (1)	A		2,417K	29	70.079	702,889.00	9	6.326	-	-	-	-	-	-	-	-	-	-	-	-
1.2) LC002 ENGINES	A		2,049K	23	47.138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) LC007 LIGHTWEIGHT ARMOR	A		610,545.45	11	6.716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) LC008 COLD WEATHER KITS	A		646,285.71	7	4.524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) LC009 PERSONNEL TRANSPORT MODULE	A		857,090.91	11	9.428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6) LC010 LCAC 100 CLASS MAJOR SHORE BASED SPARES (SSC) (2)	A		-	-	-	-	-	14.988	-	-	17.452	-	-	10.794	-	-	-	-	-	10.794
Subtotal: 1) LCAC			**-**	**-**	***137.885***	**-**	**-**	***21.314***	**-**	**-**	***17.452***	**-**	**-**	***10.794***	**-**	**-**	**-**	**-**	**-**	***10.794***
Total			**-**	**-**	**137.885**	**-**	**-**	**21.314**	**-**	**-**	**17.452**	**-**	**-**	**10.794**	**-**	**-**	**-**	**-**	**-**	**10.794**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) The LCAC System Upgrade Program provides procurement and installation of components required to maintain acceptable levels of fleet operational readiness. LCAC System Upgrade Program will also provide materials to support systems upgrades. Equipment removal and installation will take place at Assault Craft Unit FOUR (ACU 4), ACU 5 and Naval Beach Unit SEVEN (NBU 7). Specific items procured vary from year to year based on Fleet needs; these items include but are not limited to C4N upgrades and deep skirt replacements.

(2) The LCAC 100 Class began deliveries in FY20, and funding supports the procurement of spares for the newly delivered LCAC 100 Class craft (Ship-to-Shore Connector, SSC). Decreased funding from FY23 to FY24 is due to the reduction of Major Shore Based Spares (MSBS) planned procurement.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0603654N
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	374.096	24.146	35.417	19.549	0.000	19.549	16.778	23.861	24.221	24.789	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	374.096	24.146	35.417	19.549	0.000	19.549	16.778	23.861	24.221	24.789	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**374.096**	**24.146**	**35.417**	**19.549**	**0.000**	**19.549**	**16.778**	**23.861**	**24.221**	**24.789**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	1.499	2.518	1.881	-	1.881	1.605	1.936	1.133	1.091	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Underwater Explosive Ordnance Disposal (EOD) program supplies EOD and maritime expeditionary forces with the necessary allowance outfitting, and diving and diving-related equipment aligned to fulfill assigned missions that includes Expeditionary Mine Countermeasures (ExMCM), and other maritime expeditionary missions. Most equipment must have inherently low acoustic and magnetic signatures to support maritime operations in the vicinity of influence fired ordnance. This funding supports outfitting the Navy's only comprehensive capability that can conduct full spectrum detect-to-engage ExMCM missions. Specifically, the (EOD) program supports EOD units worldwide as well as Mobile Diving and Salvage Units (MDSUs) and Naval Construction Forces (NCF) across the globe.

The nature of the missions assigned to EOD and MCM forces under OPNAVINST 3501.97, Required Operational Capabilities & Projected Operational Environments (ROC/POE), require an aggregated set of systems and equipment to perform the wide range of mine countermeasures, underwater detection, location, investigation, force protection, exploitation, and neutralization tasks that comprise the mission set. The requirements for the procurement of each of these system suites are articulated in OPNAV approved requirements documents in accordance with DoD Directive 5000.2, SECNAVINST 5000.2, and the JCIDS process as defined by CJSCINST 3170.01 and defined by the JROC approved ExMCM ICD.

In FY21 and across the FYDP, funding previously included in BLI 0977 for procurement of Unmanned Undersea Vehicles (UUVs) for ExMCM is now in BLI 1611.

In FY22 and across the FYDP, funding previously included in BLI 0977 for procurement of Unmanned Undersea Vehicles (UUVs) for Navy Special Warfare Forces (NSW) is now in BLI 1611.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603654N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-5	1 / Underwater EOD Programs	P-5a, P-21			- / 266.243	- / 19.153	- / 24.838	- / 17.421	- / 0.000	- / 17.421
P-5	2 / Expeditionary Mine Countermeasures (ExMCM)	P-5a, P-21			- / 92.734	- / 4.993	- / 10.579	- / 2.128	- / 0.000	- / 2.128
P-5	3 / Naval Special Warfare Forces	P-5a			- / 15.119	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 374.096**	**- / 24.146**	**- / 35.417**	**- / 19.549**	**- / 0.000**	**- / 19.549**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2024 funding is required to continue procurement and fielding of Underwater EOD program systems and equipment to outfit ExMCM Companies, EOD Units, MDSUs, and NCFs with advanced sensors and hardware required to accomplish their OPNAV approved missions. This equipment will allow warfighters to detect, locate, neutralize, and render safe unexploded ordnance including improvised explosive devices; conduct expeditionary salvage; and underwater construction missions.

FY 24 funding commences procurement of Maritime Expeditionary Standoff Response (MESR) Payload Kits and MESR Platforms.

-CE 2.1.6 MESR Payload Kits - Sensors: Procurement qtys increased from 0 units in FY23 to 66 units in FY 24 in support of Maritime Expeditionary Response Vehicle efforts. This line was broken out from MESR platforms to account for various MESR payloads.

-CE 2.1.7 MESR Payload Kits - Kinetic Effects: Procurement qtys increased from 0 units in FY23 to 66 units in FY 24 in support of Maritime Expeditionary Response Vehicle efforts. This line was broken out from MESR platforms to account for various MESR payloads.

-CE 2.1.8 MESR Payload Kits - C3 Modules: Procurement qtys increased from 0 units in FY23 to 66 units in FY 24 in support of Maritime Expeditionary Response Vehicle efforts. This line was broken out from MESR platforms to account for various MESR payloads.

-CE 2.1.9 MESR Platforms: Procurement qtys increased from 0 units in FY23 to 12 units in FY24 in support of Maritime Expeditionary Response Vehicle efforts.

Additionally, this line enables production engineering and integrated logistics support needed for all ExMCM Companies, EOD Units, MDSUs, and NCFs. These systems provide the only ExMCM capability in the US Navy. If not properly outfitted, these EOD forces will not be able to detect, locate, neutralize, and render safe underwater ordnance, sea mines, and other explosive hazards, which will significantly degrade Fleet Maneuver against near peer adversaries. Specifically, this procures the next generation of Advanced Diver Integrated Sensors (STRIDENT), significantly increasing EOD diver capability to neutralize, destroy, or recover undersea mines. Remotely Operated Vehicles (ROV) will be procured to provide standoff EOD Response capabilities for mine/unexploded ordnance (UXO) target prosecution beyond depths of the diver or in situations where exposure is unnecessary.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment	**Item Number / Title [DODIC]:** 1 / Underwater EOD Programs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	266.243	19.153	24.838	17.421	0.000	17.421
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	266.243	19.153	24.838	17.421	0.000	17.421
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**266.243**	**19.153**	**24.838**	**17.421**	**0.000**	**17.421**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Hardware - UQ019-MINE WARFARE VULENERABILITY IDENTIFICATION PROGRAM (MIW-VIP) Cost																		
Recurring Cost																		
1.1.1) MIW-VIP (1)	-	-	3.123	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*3.123*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - UQ019-MINE WARFARE VULENERABILITY IDENTIFICATION PROGRAM (MIW-VIP) Cost	**-**	**-**	***3.123***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - UQ034 - U/W EOD & MCM SYSTEMS/EQUIPMENT Cost																		
Recurring Cost																		
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV)(†) (2)	233,672.13	61	14.254	276,900.00	50	13.845	328,000.00	14	4.592	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT)(†) (3)	161,007.46	134	21.575	-	-	0.000	175,000.00	50	8.750	178,500.00	30	5.355	-	-	0.000	178,500.00	30	5.355
2.1.3) COMMAND DETONATION SYSTEM (RUFIS Receiver)(†) (4)	19,482.76	290	5.650	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.5) INFLUENCE SIGNATURE REDUCTION	-	-	3.252	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Equipment	Item Number / Title [DODIC]: 1 / Underwater EOD Programs
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
2.1.6) MESR PAYLOAD KITS - Sensors(†) (5)	-	-	0.000	-	-	0.000	-	-	0.000	18,303.03	66	1.208	-	-	0.000	18,303.03	66	1.208
2.1.7) MESR PAYLOAD KITS - Kinetic Effects(†) (6)	-	-	0.000	-	-	0.000	-	-	0.000	16,400.00	66	1.082	-	-	0.000	16,400.00	66	1.082
2.1.8) MESR PAYLOAD KITS - C3 Modules(†) (7)	-	-	0.000	-	-	0.000	-	-	0.000	40,833.33	66	2.695	-	-	0.000	40,833.33	66	2.695
2.1.9) MESR PLATFORMS(†) (8)	-	-	0.000	-	-	0.000	-	-	0.000	350,000.00	12	4.200	-	-	0.000	350,000.00	12	4.200
2.1.10) MDSU RESPONSE REMOTELY OPERATED VEHICLE (ROV)(†) (9)	-	-	0.000	-	-	0.000	328,000.00	9	2.952	-	-	0.000	-	-	0.000	-	-	0.000
2.1.11) MDSU PRODUCTION ENGINEERING & TEST (10)	-	-	0.000	-	-	0.000	-	-	0.112	-	-	0.000	-	-	0.000	-	-	0.000
2.1.12) NCF RESPONSE REMOTELY OPERATED VEHICLE (ROV)(†) (11)	-	-	0.000	-	-	0.000	328,000.00	10	3.280	-	-	0.000	-	-	0.000	-	-	0.000
2.1.13) NCF PRODUCTION ENGINEERING & TEST (12)	-	-	0.000	-	-	0.000	-	-	0.202	-	-	0.000	-	-	0.000	-	-	0.000
2.1.14) PRODUCTION ENGINEERING & TEST (13)	-	-	5.101	-	-	1.485	-	-	3.915	-	-	1.651	-	-	0.000	-	-	1.651
2.1.15) INITIAL TRAINING (14)	-	-	0.814	-	-	0.527	-	-	0.621	-	-	0.745	-	-	0.000	-	-	0.745
2.1.16) ExMCM Product Improvement (15)	-	-	0.000	-	-	0.321	-	-	0.414	-	-	0.485	-	-	0.000	-	-	0.485
Subtotal: Recurring Cost	-	-	*50.646*	-	-	*16.178*	-	-	*24.838*	-	-	*17.421*	-	-	*0.000*	-	-	*17.421*
Subtotal: Hardware - UQ034 - U/W EOD & MCM SYSTEMS/EQUIPMENT Cost	**-**	**-**	***50.646***	**-**	**-**	***16.178***	**-**	**-**	***24.838***	**-**	**-**	***17.421***	**-**	**-**	***0.000***	**-**	**-**	***17.421***

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Hardware - UQ035 - OUTFIT EOD/UMCM TOOLS & EQUIPMENT Cost																		
Recurring Cost																		
3.1.1) UW INTEGRATED SYSTEM INTERFACE	-	-	2.891	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*2.891*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - UQ035 - OUTFIT EOD/UMCM TOOLS & EQUIPMENT Cost	**-**	**-**	***2.891***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - UQ036 - DIVER SAFETY LIFE SUPPORT EQUIPMENT Cost																		
Recurring Cost																		
4.1.1) MMUBA SUPPORT EQUIPMENT (16)	-	-	5.744	-	-	2.282	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.2) MMUBA EQUIPMENT(†) (17)	-	-	0.000	99,000.00	7	0.693	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*5.744*	-	-	*2.975*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - UQ036 - DIVER SAFETY LIFE SUPPORT EQUIPMENT Cost	**-**	**-**	***5.744***	**-**	**-**	***2.975***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - UQ037 - MARINE MAMMAL SYSTEM/EQUIPMENT Cost																		
Recurring Cost																		
5.1.1) MMS FIELDING AND INVESTMENT	-	-	45.895	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*45.895*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - UQ037 - MARINE MAMMAL SYSTEM/EQUIPMENT Cost	**-**	**-**	***45.895***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - UQ040 MK 18 UUV Cost																		
Recurring Cost																		
6.1.1) MK18 MOD 2 RETROFIT KITS (INC I) (0204224N)(†)	73,750.00	60	4.425	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.2) MK18 MOD 2 UUV OCO RESET (18)	-	-	5.800	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.3) MK18 MOD 2 RETROFIT KITS (ATLAS FORWARD	400,000.00	45	18.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
LOOK SONAR) (0204224N)(†) (19)																		
6.1.4) MK 18 MOD 2 UUV (0204224N)(†) (20)	1,084K	42	45.545	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.5) MK 18 MOD 1 UMCM UUV INCREMENTAL (CIP) Retrofit Kit (0204224N)(†) (21)	1,062K	23	24.416	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*98.186*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - UQ040 MK 18 UUV Cost	**-**	**-**	***98.186***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Support - UQ830 - PRODUCTION ENGINEERING Cost																		
7.1) PRODUCTION ENGINEERING	-	-	29.813	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - UQ830 - PRODUCTION ENGINEERING Cost	**-**	**-**	***29.813***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Support - UQ850 - PRODUCT IMPROVEMENT Cost																		
8.1) PRODUCT IMPROVEMENT	-	-	27.188	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - UQ850 - PRODUCT IMPROVEMENT Cost	**-**	**-**	***27.188***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Support - UQTNG - INITIAL TRAINING Cost																		
9.1) INITIAL TRAINING	-	-	2.757	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - UQTNG - INITIAL TRAINING Cost	**-**	**-**	***2.757***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Gross/Weapon System Cost	**-**	**-**	**266.243**	**-**	**-**	**19.153**	**-**	**-**	**24.838**	**-**	**-**	**17.421**	**-**	**-**	**0.000**	**-**	**-**	**17.421**

(†) indicates the presence of a P-5a

Footnotes:

(1) CE 1.1.1 MIW-VIP: MIW-VIP measures magnetic and acoustic signatures of equipment that will be exposed to influence (magnetic and acoustic) ordnance in combat. This effort utilizes existing ranges and portable ranges (Forward Area Combined Degaussing and Acoustic Range (FACDAR)). Beginning in FY21 this cost element was eliminated.

(2) CE 2.1.1 ExMCM EOD Response Remotely Operated Vehicle (ROV): Provides procurement funding for fleet outfitting.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

(3) CE 2.1.2 ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT): Provides for the procurement of a specialized EOD Diver underwater handheld sonar that is developed to operate in an influence fired ordnance environment.

(4) CE 2.1.3 COMMAND DETONATION SYSTEMS (Rufis Receiver): Provides for the procurement of improved underwater acoustic receivers to provide safe stand-off command detonation capabilities to Explosive Ordnance Disposal (EOD) divers. The improved receiver will address the current capability shortfalls of the legacy MK 58 receiver by improving the signal fidelity, receiving range, and interoperability with delivery systems.

(5) CE 2.1.6 MESR PAYLOAD KITS - Sensors: Provides for the procurement of sensor-based payloads (e.g., acoustic, electro-optic, tactile, etc) that will be integrated onto MESR platforms to provide improved detection, localization, and identification capabilities when deployed in EOD Response missions.

(6) CE 2.1.7 MESR PAYLOAD KITS - Kinetic Effects: Provides for the procurement of kinetic payloads (e.g., explosive disruptors, bulk charges, etc) that will be integrated onto MESR platforms to provide improved neutralization capabilities when deployed in EOD Response missions.

(7) CE 2.1.8 MESR PAYLOAD KITS - C3 Modules: Provides for the procurement of command, control, and communication payloads (e.g., surface relays, acoustic modems, AI/ML algorithms, etc.) that will be integrated onto MESR platforms to provide improved safety stand-off and autonomous capabilities when deployed in EOD Response missions.

(8) CE 2.1.9 Provides procurement funding for Fleet outfitting. Procurement qtys increased from 0 units in FY23 to 12 units in FY24 in support of Maritime Expeditionary Response Vehicle efforts.

(9) CE 2.1.10 Provides procurement funding for fleet outfitting. Procures same vehicle as CE 2.1.1.

(10) CE 2.1.11 MDSU PRODUCTION ENGINEERING & TEST: Provides for production support, first article tests, and factory acceptance tests for MDSU Response ROVs.

(11) CE 2.1.12 NCF RESPONSE REMOTELY OPERATED VEHICLE (ROV): Provides procurement funding for fleet outfitting. Procures same vehicle as CE 2.1.1.

(12) CE 2.1.13 MDSU PRODUCTION ENGINEERING & TEST: Provides for production support, first article tests, and factory acceptance tests for NCF Response ROVs.

(13) CE 2.1.14 PRODUCTION ENGINEERING: Provides for production support, first article tests, and factory acceptance tests for EOD Response ROVs, MMUBA, STRIDENT, and other EOD equipment requiring additional production support.

(14) CE 2.1.15 INITIAL TRAINING: Funding provides for initial training of MMUBA, ROV, MESR, and STRIDENT efforts. Slight increase from FY23 due to the procurement of initial training due to the introduction of STRIDENT into the EOD course of instruction at NAVSCOLEOD.

(15) CE 2.1.16 PRODUCT IMPROVEMENT: Provides for engineering services to improve fielded EOD Diver systems and ROVs. Slight increase from FY23 due to the procurement of approved engineering changes in UWEOD configured items (CIs).

(16) CE 4.1.1 Provides the procurement of technologies to provide safer tools and life support systems for EOD UMCM and MDSU operations.

(17) CE 4.1.2 MMUBA EQUIPMENT: These resources will procure the Multi-Mission Underwater Breathing Apparatus (MMUBA), which replaces the aging MK-16 UBA. This procurement will substantially improve a diver's ability to quickly and effectively counter enemy influence ordnance, which will decrease the detect to engage timeline and open sea lanes more quickly to Fleet maneuver and commercial shipping.

(18) CE 6.1.2 MK18 MOD2 UUV OCO RESET: Reset funding is for replacement of UUVs lost during fleet operations in support of C5F missions. OCO resources will replace and restore deployed systems to full operational readiness to meet C5F mission needs. Beginning in FY21 this cost element was transferred to BLI 1611.

(19) CE 6.1.3 MK18 MOD 2 RETROFIT KITS (ATLAS FORWARD LOOK SONAR) (0204224N): Provides for procurement of UUV MK 18 Mod 2 retrofit kits, which will be employed in operational missions in Shallow Water (SW) and Very Shallow Water (VSW) environments including GFM deployments of Expeditionary MCM Companies ISO C5F and C7F. These retrofit kits add advanced sensor capability to the MK 18 Mod 2 system, and specifically the ability to detect sea mines and other hazards in the volume of water (vice the sea floor). Beginning in FY21 this cost element was transferred to BLI 1611.

(20) Provides for procurement of UUV MK 18 Mod 2 vehicles, which will be employed in operational missions in Shallow Water (SW) and Very Shallow Water (VSW) environments including GFM deployments of Expeditionary MCM Companies ISO C5F and C7F. These UUVs are a critical component of the Expeditionary MCM detect to engage sequence for undersea mines and the inventory of these UUVs in doubling in conjunction with the growth of Expeditionary MCM Companies from 8 to 16 over the FYDP. Beginning in FY21 this cost element was transferred to BLI 1611.

(21) CE 6.1.5 MK 18 MOD 1 UMCM UUV INCREMENTAL (CIP) Retrofit Kit (0204224N): Unit cost of individual retrofit kits may vary based on the number and type of technologies included and systems being upgraded and are identified as incremental Block Upgrades (e.g., current increment Block C retrofit kit is an upgrade in capability for the Mk 18 Mod 1 UUV system). These retrofit kits address more than one

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

upgrade and address different functional area, i.e. enhanced navigation, system autonomy, improved post mission analysis, etc. Accordingly the number of retrofit kits may exceed number of systems/vehicles fielded. Beginning in FY21 this cost element was transferred to BLI 1611.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
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Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV)(†)		2018	U.S. ARMY / VARIOUS	C / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Mar 2019	14	175,000.00	Y		
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV)(†)		2019	U.S. ARMY / VARIOUS	C / FFP	PICATINNY ARSENAL, NJ	Mar 2019	Mar 2020	9	205,555.00	Y		
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV)(†)		2021	U.S. ARMY / VARIOUS	C / FFP	PICATINNY ARSENAL, NJ, NJ	Mar 2021	Mar 2022	38	261,944.44	Y		
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV)(†)		2022	U.S. ARMY / VARIOUS	C / FFP	PICATINNY ARSENAL, NJ, NJ	Mar 2022	Mar 2023	50	276,900.00	Y		
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV)(†)		2023	U.S. ARMY / VARIOUS	C / FFP	PICATINNY ARSENAL, NJ, NJ	Mar 2023	Mar 2024	14	328,000.00	Y		
2.1.2) ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT)(†)		2018	SHARK MARINE / HALIFAX, CANADA	C / FFP	Various	May 2018	May 2019	5	220,000.00	Y		
2.1.2) ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT)(†)		2020	SHARK MARINE / HALIFAX, CANADA	C / FFP	Various	Oct 2019	Oct 2020	5	230,000.00	Y		
2.1.2) ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT)(†)		2023	TBD / TBD	C / FFP	Various	Nov 2022	Nov 2023	50	175,000.00	Y		
2.1.2) ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT)(†)		2024	TBD / TBD	C / FFP	Various	Nov 2023	Nov 2024	30	178,500.00	Y		
2.1.3) COMMAND DETONATION SYSTEM (RUFIS Receiver)		2020	UARC-University of Texas at Austin / Austin, TX	C / TBD	NAVSEA, HQ	Oct 2019	Oct 2020	50	4,000.00	Y		
2.1.6) MESR PAYLOAD KITS - Sensors		2024	TBD / New MFG - Loc	C / TBD	** NO PCO **	Oct 2023	Oct 2023	66	18,303.03	N		
2.1.7) MESR PAYLOAD KITS - Kinetic Effects		2024	TBD / TBD	C / TBD	** NO PCO **	Nov 2023	Nov 2024	66	16,400.00	N		
2.1.8) MESR PAYLOAD KITS - C3 Modules		2024	TBD / TBD	C / TBD	** NO PCO **	Nov 2023	Nov 2024	66	40,833.33	N		
2.1.9) MESR PLATFORMS		2024	TBD / TBD	C / TBD	** NO PCO **	Nov 2023	Nov 2023	12	350,000.00	Y		
2.1.10) MDSU RESPONSE REMOTELY OPERATED VEHICLE (ROV)		2023	US Army / Various	C / FFP	PICATINNY ARSENAL, NJ, NJ	Mar 2023	Mar 2024	9	328,000.00	Y		

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
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Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.12) NCF RESPONSE REMOTELY OPERATED VEHICLE (ROV)		2023	US Army / Various	C / FFP	PICATINNY ARSENAL, NJ	Mar 2023	Mar 2024	10	328,000.00	N	Nov 2023	
4.1.2) MMUBA EQUIPMENT(†)		2022	TBD / TBD	C / FFP	** NO PCO **	Sep 2022	Sep 2023	7	99,000.00	Y		
6.1.1) MK18 MOD 2 RETROFIT KITS (INC I) (0204224N)		2018	VARIOUS / VARIOUS	C / FFP	VARIOUS	Apr 2018	Apr 2019	24	73,750.00	Y		
6.1.1) MK18 MOD 2 RETROFIT KITS (INC I) (0204224N)		2019	VARIOUS / VARIOUS	C / FFP	VARIOUS	Apr 2019	Apr 2020	24	73,750.00	Y		
6.1.1) MK18 MOD 2 RETROFIT KITS (INC I) (0204224N)		2020	VARIOUS / VARIOUS	C / FFP	VARIOUS	Apr 2020	Apr 2021	12	73,750.00	Y		
6.1.3) MK18 MOD 2 RETROFIT KITS (ATLAS FORWARD LOOK SONAR) (0204224N)(†)		2018	VARIOUS / VARIOUS	C / FFP	NIWC PAC	Apr 2018	Apr 2019	15	400,000.00	Y		
6.1.3) MK18 MOD 2 RETROFIT KITS (ATLAS FORWARD LOOK SONAR) (0204224N)(†)		2019	VARIOUS / VARIOUS	C / FFP	NIWC PAC	Apr 2019	Apr 2020	22	400,000.00	Y		
6.1.3) MK18 MOD 2 RETROFIT KITS (ATLAS FORWARD LOOK SONAR) (0204224N)(†)		2020	VARIOUS / VARIOUS	C / FFP	NIWC PAC	Apr 2020	Apr 2021	8	400,000.00	Y		
6.1.4) MK 18 MOD 2 UUV (0204224N)(†)		2018	VARIOUS / VARIOUS	C / TBD	NSWCIH, MD	Jan 2018	Jan 2019	8	990,000.00	Y		
6.1.4) MK 18 MOD 2 UUV (0204224N)(†)		2019	VARIOUS / VARIOUS	C / TBD	NSWCIH, MD	Jan 2019	Jan 2020	3	1,050K	Y		
6.1.4) MK 18 MOD 2 UUV (0204224N)(†)		2020	VARIOUS / VARIOUS	C / TBD	NSWCIH, MD	Jan 2020	Jan 2021	12	1,054K	Y		
6.1.5) MK 18 MOD 1 UMCM UUV INCREMENTAL (CIP) Retrofit Kit (0204224N)		2018	VARIOUS / VARIOUS	C / TBD	NSWCIH, MD	Oct 2017	Oct 2018	6	1,060K	Y		
6.1.5) MK 18 MOD 1 UMCM UUV INCREMENTAL (CIP) Retrofit Kit (0204224N)		2019	VARIOUS / VARIOUS	C / TBD	NSWCIH	Oct 2018	Oct 2019	2	1,060K	Y		
6.1.5) MK 18 MOD 1 UMCM UUV INCREMENTAL (CIP) Retrofit Kit (0204224N)		2020	VARIOUS / VARIOUS	C / TBD	NSWCIH, MD	Oct 2019	Oct 2020	3	1,072K	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

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Cost Elements (Units in Each)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
							Calendar Year 2018												Calendar Year 2019												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV) (2)																															
	1	2018	NAVY	14	0	14						A -	-	-	-	-	-	-	-	-	-	-	-	14							0
	1	2019	NAVY	9	0	9																		A -	-	-	-	-	-	-	9
	1	2021	NAVY	38	0	38																									38
	1	2022	NAVY	50	0	50																									50
	1	2023	NAVY	14	0	14																									14
2.1.2) ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT) (3)																															
Prior Years Deliveries: 124																															
	2	2018	NAVY	5	0	5								A -	-	-	-	-	-	-	-	-	-	-	-	5					0
	2	2020	NAVY	5	0	5																									5
	3	2023	NAVY	50	0	50																									50
	3	2024	NAVY	30	0	30																									30
4.1.2) MMUBA EQUIPMENT (17)																															
	4	2022	NAVY	7	0	7																									7
6.1.3) MK18 MOD 2 RETROFIT KITS (ATLAS FORWARD LOOK SONAR) (0204224N) (19)																															
	5	2018	NAVY	15	0	15							A -	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	9
	5	2019	NAVY	22	0	22																			A -	-	-	-	-	-	22
	5	2020	NAVY	8	0	8																									8
6.1.4) MK 18 MOD 2 UUV (0204224N) (20)																															
Prior Years Deliveries: 19																															
	6	2018	NAVY	8	0	8				A -	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1		0
	6	2019	NAVY	3	0	3																A -	-	-	-	-	-	-	-	-	3
	6	2020	NAVY	12	0	12																									12
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment	**Item Number / Title [DODIC]:** 1 / Underwater EOD Programs

Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
										Calendar Year 2020												Calendar Year 2021									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV) (2)																															
	1	2018	NAVY	14	14	0																									0
	1	2019	NAVY	9	0	9	-	-	-	-	-	9																			0
	1	2021	NAVY	38	0	38																		A -	-	-	-	-	-	-	38
	1	2022	NAVY	50	0	50																									50
	1	2023	NAVY	14	0	14																									14
2.1.2) ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT) (3)																															
Prior Years Deliveries: 124																															
	2	2018	NAVY	5	5	0																									0
	2	2020	NAVY	5	0	5	A -	-	-	-	-	-	-	-	-	-	-	-	5												0
	3	2023	NAVY	50	0	50																									50
	3	2024	NAVY	30	0	30																									30
4.1.2) MMUBA EQUIPMENT (17)																															
	4	2022	NAVY	7	0	7																									7
6.1.3) MK18 MOD 2 RETROFIT KITS (ATLAS FORWARD LOOK SONAR) (0204224N) (19)																															
	5	2018	NAVY	15	6	9	1	1	1	1	1	1	1	1	1																0
	5	2019	NAVY	22	0	22	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
	5	2020	NAVY	8	0	8							A -	-	-	-	-	-	-	-	-	-	-	-	8						0
6.1.4) MK 18 MOD 2 UUV (0204224N) (20)																															
Prior Years Deliveries: 19																															
	6	2018	NAVY	8	8	0																									0
	6	2019	NAVY	3	0	3	-	-	-	1	-	-	1	-	-	1															0
	6	2020	NAVY	12	0	12				A -	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	3
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 | **P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment | **Item Number / Title [DODIC]:** 1 / Underwater EOD Programs

Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV) (2)																															
	1	2018	NAVY	14	14	0																									0
	1	2019	NAVY	9	9	0																									0
	1	2021	NAVY	38	0	38	-	-	-	-	-	38																			0
	1	2022	NAVY	50	0	50						A -	-	-	-	-	-	-	-	-	-	-	-	50							0
	1	2023	NAVY	14	0	14																		A -	-	-	-	-	-	-	14
2.1.2) ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT) (3)																															
Prior Years Deliveries: 124																															
	2	2018	NAVY	5	5	0																									0
	2	2020	NAVY	5	5	0																									0
	3	2023	NAVY	50	0	50														A -	-	-	-	-	-	-	-	-	-	-	50
	3	2024	NAVY	30	0	30																									30
4.1.2) MMUBA EQUIPMENT (17)																															
	4	2022	NAVY	7	0	7												A -	-	-	-	-	-	-	-	-	-	-	-	7	0
6.1.3) MK18 MOD 2 RETROFIT KITS (ATLAS FORWARD LOOK SONAR) (0204224N) (19)																															
	5	2018	NAVY	15	15	0																									0
	5	2019	NAVY	22	18	4	1	1	1	1																					0
	5	2020	NAVY	8	8	0																									0
6.1.4) MK 18 MOD 2 UUV (0204224N) (20)																															
Prior Years Deliveries: 19																															
	6	2018	NAVY	8	8	0																									0
	6	2019	NAVY	3	3	0																									0
	6	2020	NAVY	12	9	3	1	1	1																						0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
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Cost Elements (Units in Each)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
							Calendar Year 2024												Calendar Year 2025												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) ExMCM EOD Response Remotely Operated Vehicle (ROV) (2)																															
	1	2018	NAVY	14	14	0																									0
	1	2019	NAVY	9	9	0																									0
	1	2021	NAVY	38	38	0																									0
	1	2022	NAVY	50	50	0																									0
	1	2023	NAVY	14	0	14	-	-	-	-	-	14																			0
2.1.2) ADVANCED DIVER INTEGRATION SENSORS (e.g. STRIDENT) (3)																															
Prior Years Deliveries: 124																															
	2	2018	NAVY	5	5	0																									0
	2	2020	NAVY	5	5	0																									0
	3	2023	NAVY	50	0	50	-	50																							0
	3	2024	NAVY	30	0	30		A -	-	-	-	-	-	-	-	-	-	-	-	30											0
4.1.2) MMUBA EQUIPMENT (17)																															
	4	2022	NAVY	7	7	0																									0
6.1.3) MK18 MOD 2 RETROFIT KITS (ATLAS FORWARD LOOK SONAR) (0204224N) (19)																															
	5	2018	NAVY	15	15	0																									0
	5	2019	NAVY	22	22	0																									0
	5	2020	NAVY	8	8	0																									0
6.1.4) MK 18 MOD 2 UUV (0204224N) (20)																															
Prior Years Deliveries: 19																															
	6	2018	NAVY	8	8	0																									0
	6	2019	NAVY	3	3	0																									0
	6	2020	NAVY	12	12	0																									0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	U.S. ARMY - VARIOUS			TBD	0	0	0	0	0	0	0	0
2	SHARK MARINE - HALIFAX, CANADA			TBD	0	0	0	0	0	0	0	0
3	TBD - TBD			TBD	0	0	0	0	0	0	0	0
4	TBD - TBD			TBD	0	0	0	0	0	0	0	0
5	VARIOUS - VARIOUS			TBD	0	0	0	0	0	0	0	0
6	VARIOUS - VARIOUS			TBD	0	0	0	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	92.734	4.993	10.579	2.128	0.000	2.128
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	92.734	4.993	10.579	2.128	0.000	2.128
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**92.734**	**4.993**	**10.579**	**2.128**	**0.000**	**2.128**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Hardware - UQ038 Expeditionary Mine Countermeasures (ExMCM) Cost																		
Recurring Cost																		
1.1.1) MK18 MOD 1 UUV (0207404N)(†)	430,142.86	35	15.055	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) MK18 MOD 1 UMCM UUV INCREMENTAL (CIP) RETROFIT KIT (0207404N)(†)	1,072K	5	5.360	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) MK18 MOD 2 RETROFIT KITS (SSAM) (0207404N)(†)	600,000.00	15	9.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.4) MK18 MOD 2 RETROFIT KITS (ATLAS) (0207404N)(†)	400,000.00	4	1.600	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.5) ExMCM AUX/ SUPPORT/MAINT/ MSE KITS(†)	394,887.85	107	42.253	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.6) ExMCM EOD RESPONSE REMOTELY OPERATED VEHICLE (ROV)(†) (22)	260,181.82	22	5.724	277,000.00	12	3.324	328,000.00	28	9.184	335,000.00	2	0.670	-	-	0.000	335,000.00	2	0.670

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment	**Item Number / Title [DODIC]:** 2 / Expeditionary Mine Countermeasures (ExMCM)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.1.7) ExMCM TOA EQUIPMENT (23)	-	-	4.592	-	-	1.669	-	-	1.395	-	-	1.458	-	-	0.000	-	-	1.458
1.1.8) ExMCM DIVER EQUIPMENT	-	-	9.150	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*92.734*	-	-	*4.993*	-	-	*10.579*	-	-	*2.128*	-	-	*0.000*	-	-	*2.128*
Subtotal: Hardware - UQ038 Expeditionary Mine Countermeasures (ExMCM) Cost	**-**	**-**	***92.734***	**-**	**-**	***4.993***	**-**	**-**	***10.579***	**-**	**-**	***2.128***	**-**	**-**	***0.000***	**-**	**-**	***2.128***
Gross/Weapon System Cost	**-**	**-**	**92.734**	**-**	**-**	**4.993**	**-**	**-**	**10.579**	**-**	**-**	**2.128**	**-**	**-**	**0.000**	**-**	**-**	**2.128**

Remarks:
[Hardware/Recurring] [Hardware/Recurring] ExMCM Outfitting: This funding resources the procurement of Expeditionary systems and support equipment. Procurement of this equipment will allow the ExMCM forces to be deployed globally and employed from a wide variety of shipboard platforms at sea as well as small craft in performing EOD and EXMCM missions in support of global requirements. The various ExMCM outfitting kits comprise the ancillary and support equipment necessary to outfit an ExMCM Company with equipment based on approved Tables of Allowances (TOAs) and are procured from a variety of OEMs and sources.

UUV funding previously provided under Cost Elements 1.1.1. - 1.1.5 has been re-programmed to newly established BLI 1611 Small and Medium Class UUVs.

(†) indicates the presence of a P-5a

Footnotes:
(22) CE 1.1.6 ExMCM EOD RESPONSE REMOTELY OPERATED VEHICLE (ROV): Procurement of EOD Response vehicles and associated sub-systems to leverage advancements in robotic manipulators, target recognition software, user interface, and explosive recognition and neutralization that have been achieved in land robots and which can now be integrated into undersea remotely operated vehicles. These EOD response systems will enable more rapid reacquisition, identification and neutralization of mine like targets found by other search assets. Unit cost increase is attributed to updated software packages that improve and increase system performance, and increased capability to utilize additional sensor packages and payloads.
(23) CE 1.1.7 ExMCM TOA EQUIPMENT: Procurement of EXMCM Company Table of Allowance (TOA) equipment for the sixteen ExMCM companies supporting global operations. Slight increase from FY23 due to the procurement of additional EOD items listed on the approved Table of Allowance (EOD TOA).

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Equipment	Item Number / Title [DODIC]: 2 / Expeditionary Mine Countermeasures (ExMCM)

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) MK18 MOD 1 UUV (0207404N)(†)		2019	HYDROID / POCASSET, MA	C / FFP	NSWCIH, MD	Nov 2018	Nov 2019	12	440,000.00	Y		
1.1.1) MK18 MOD 1 UUV (0207404N)(†)		2020	HYDROID / POCASSET, MA	C / FFP	NSWCIH, MD	Jan 2020	Jan 2021	12	449,000.00	Y		
1.1.2) MK18 MOD 1 UMCM UUV INCREMENTAL (CIP) RETROFIT KIT (0207404N)(†)		2020	HYDROID / POCASSET, MA	C / FFP	NSWCIH, MD	Nov 2019	Nov 2020	5	1,072K	Y		
1.1.3) MK18 MOD 2 RETROFIT KITS (SSAM) (0207404N)(†)		2020	HYDROID / POCASSET, MA	C / FFP	NSWCIH, MD	Mar 2020	Mar 2021	15	600,000.00	Y		
1.1.4) MK18 MOD 2 RETROFIT KITS (ATLAS) (0207404N)		2020	HYDROID / POCASSET, MA	C / FFP	NSWCIH, MD	Mar 2020	Mar 2021	4	400,000.00	Y		
1.1.5) ExMCM AUX/SUPPORT/ MAINT/MSE KITS		2018	VARIOUS / VARIOUS	C / FFP	NSWCIH, MD	Oct 2017	Oct 2017	25	390,000.00	Y		
1.1.5) ExMCM AUX/SUPPORT/ MAINT/MSE KITS		2019	VARIOUS / VARIOUS	C / FFP	NSWCIH, MD	Mar 2019	Mar 2020	35	416,142.86	Y		
1.1.5) ExMCM AUX/SUPPORT/ MAINT/MSE KITS		2020	VARIOUS / VARIOUS	C / FFP	NSWCIH, MD	Mar 2020	Mar 2021	11	413,545.45	Y		
1.1.6) ExMCM EOD RESPONSE REMOTELY OPERATED VEHICLE (ROV)		2020	U.S. ARMY / VARIOUS	C / FFP	PICATINNY ARSENAL, NJ	Mar 2020	Mar 2021	15	259,133.33	Y		
1.1.6) ExMCM EOD RESPONSE REMOTELY OPERATED VEHICLE (ROV)		2021	U.S. ARMY / VARIOUS	C / FFP	PICATINNY ARSENAL, NJ	Mar 2021	Mar 2022	7	262,411.76	Y		
1.1.6) ExMCM EOD RESPONSE REMOTELY OPERATED VEHICLE (ROV)		2022	U.S. ARMY / VARIOUS	C / FFP	PICATINNY ARSENAL, NJ	Mar 2022	Mar 2023	12	277,000.00	Y		
1.1.6) ExMCM EOD RESPONSE REMOTELY OPERATED VEHICLE (ROV)		2023	U.S. ARMY / VARIOUS	C / FFP	PICATINNY ARSENAL, NJ	Mar 2023	Mar 2024	28	328,000.00	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment	**Item Number / Title [DODIC]:** 2 / Expeditionary Mine Countermeasures (ExMCM)

Cost Elements (Units in Each)							Fiscal Year 2018												Fiscal Year 2019												BALANCE
										Calendar Year 2018												Calendar Year 2019									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) MK18 MOD 1 UUV (0207404N)																															
Prior Years Deliveries: 11																															
	1	2019	NAVY	12	0	12														A -	-	-	-	-	-	-	-	-	-	-	12
	1	2020	NAVY	12	0	12																									12
1.1.2) MK18 MOD 1 UMCM UUV INCREMENTAL (CIP) RETROFIT KIT (0207404N)																															
	2	2020	NAVY	5	0	5																									5
1.1.3) MK18 MOD 2 RETROFIT KITS (SSAM) (0207404N)																															
	3	2020	NAVY	15	0	15																									15
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment	**Item Number / Title [DODIC]:** 2 / Expeditionary Mine Countermeasures (ExMCM)

Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) MK18 MOD 1 UUV (0207404N)																															
Prior Years Deliveries: 11																															
	1	2019	NAVY	12	0	12	-	1	1	1	1	1	1	1	1	1	1	1	1												0
	1	2020	NAVY	12	0	12				A -	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	3
1.1.2) MK18 MOD 1 UMCM UUV INCREMENTAL (CIP) RETROFIT KIT (0207404N)																															
	2	2020	NAVY	5	0	5		A -	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1							0
1.1.3) MK18 MOD 2 RETROFIT KITS (SSAM) (0207404N)																															
	3	2020	NAVY	15	0	15						A -	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	8
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment	**Item Number / Title [DODIC]:** 2 / Expeditionary Mine Countermeasures (ExMCM)

Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
										Calendar Year 2022												Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) MK18 MOD 1 UUV (0207404N)																															
Prior Years Deliveries: 11																															
	1	2019	NAVY	12	12	0																									0
	1	2020	NAVY	12	9	3	1	1	1																						0
1.1.2) MK18 MOD 1 UMCM UUV INCREMENTAL (CIP) RETROFIT KIT (0207404N)																															
	2	2020	NAVY	5	5	0																									0
1.1.3) MK18 MOD 2 RETROFIT KITS (SSAM) (0207404N)																															
	3	2020	NAVY	15	7	8	1	1	2	2	2																				0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment	**Item Number / Title [DODIC]:** 2 / Expeditionary Mine Countermeasures (ExMCM)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	HYDROID - POCASSET, MA			TBD	0	0	0	0	0	0	0	0
2	HYDROID - POCASSET, MA			TBD	0	0	0	0	0	0	0	0
3	HYDROID - POCASSET, MA			TBD	0	0	0	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0977 / Underwater EOD Equipment	**Item Number / Title [DODIC]:** 3 / Naval Special Warfare Forces
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	15.119	0.000	0.000	0.000	0.000	0.000
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	15.119	0.000	0.000	0.000	0.000	0.000
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**15.119**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Hardware - UQ039 NSW Common Equipment Cost																		
Recurring Cost																		
1.1.1) NSW MK18 MOD 1 (†) (24)	3,024K	5	15.119	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*15.119*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - UQ039 NSW Common Equipment Cost	**-**	**-**	***15.119***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Gross/Weapon System Cost	**-**	**-**	**15.119**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**

Remarks:
[Hardware/Recurring] MK 18 UUV outfitting in support of Naval Special Operation Forces.

(†) indicates the presence of a P-5a

Footnotes:
(24) MK18 MOD 1 UUV: Funding procured MK18 MOD1 UUV systems in support of Naval Special Warfare missions. The MK18 UUV systems have been identified as a Navy service-common systems and beginning in FY18 are funded using Department of the Navy resources. Technical Adjustment in FY21 and out years adds OPN funds to allow for procurement of one system per year. Beginning in FY 22 and continuing across the FYDP funding is now included in BLI 1611.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Equipment	Item Number / Title [DODIC]: 3 / Naval Special Warfare Forces

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) NSW MK18 MOD 1		2018	Hydroid, Inc. / MA.	C / FFP	DLA	Dec 2017	Dec 2018	1	4,950K	Y		
1.1.1) NSW MK18 MOD 1		2019	Hydroid, Inc. / MA.	C / FFP	DLA	Dec 2018	Dec 2019	1	3,374K	Y		
1.1.1) NSW MK18 MOD 1	✓	2019	Hydroid, Inc. / MA.	C / FFP	DLA	Dec 2018	Dec 2019	1	2,500K	Y		
1.1.1) NSW MK18 MOD 1		2020	Hydroid, Inc. / MA.	C / FFP	NSWCIH, MD	Dec 2019	Dec 2020	1	1,685K	Y		
1.1.1) NSW MK18 MOD 1		2021	Hydroid, Inc. / MA.	C / FFP	DLA	Dec 2020	Dec 2021	1	2,610K	Y		

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	609.300	86.045	60.812	86.001	0.000	86.001	74.152	87.454	84.539	82.429	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	609.300	86.045	60.812	86.001	0.000	86.001	74.152	87.454	84.539	82.429	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**609.300**	**86.045**	**60.812**	**86.001**	**0.000**	**86.001**	**74.152**	**87.454**	**84.539**	**82.429**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget provides for "S" cognizance (Shipboard, Hull, Mechanical & Electrical (HM&E) equipment for surface ships and aircraft carriers) which are not in any specific category. This equipment accomplishes program alterations for installation during CNO and Fleet availabilities, fills Fleet requisitions from casualties and attrition, provide tech refresh upgrades, and replaces obsolete equipment. Primary objectives are to maintain or improve readiness, safety, reliability, reduce workload, lower maintenance costs, improve sailor quality of life, and/or sustain ship classes through their notional life or beyond. The budget purchases install various equipment including machinery pumps, generators, ship propellers and shafts, air compressors, davits, A/C Plants, and steam propulsion items. It also procures allowance items as required by the Coordinated Shipboard Allowance List (COSAL). Major programs are the CVN Class Machinery Plant Upgrades, MACHALTs, CVN Cybersecurity, and CVN 78 class upgrades.

[P40A / LT115 Additive Manufacturing]: Additive Manufacturing (AM) program to procure and install AM Equipment on Navy Platforms to increase Self-Sufficiency.

[P40A / LT060 - MACHALTs]: The Machinery Alteration (MACHALT) Program supports identification, procurement, and installation of Hull, Mechanical and Electrical (HM&E) internal equipment and system improvements on in-service surface ships. The MACHALT Program is a single source for system level Ship Change Document (SCD) deployment outside of CNO availabilities, and is a turn-key modification and alteration vehicle that supplies all required engineering, equipment, logistics, installation, management, tracking, reporting, scheduling, special tools and/or procedures, and Ship's Force training. MACHALTs are installed via the Navy Modernization Process (NMP) in the following priority order: (1) Mandatory Safety/Statutory, (2) component-level installations targeting risk to TYCOM operational redlines, (3) Safety, and (4) Troubled Systems/Obsolescence Alts. The program seamlessly integrates small modernization upgrades into ship maintenance Window(s) of Opportunity (WOO) or Continuous Maintenance Availability (CMAV) periods. Due to Fleet usage, requirements, and alignment of availability periods in a given year, adjustments are made to quantities and items throughout the FYDP. Program execution improves system reliability/maintainability/availability, reduces Diminishing Manufacturing Sources Material Shortages (DMSMS) /obsolescence risk, drives increased commonality, and reduces life cycle cost.

[P40A / LT120 - Carrier Propulsion Plant Inspection]: Funds are used to procure the latest technology inspection system tooling, i.e., laser-optic, ultrasonic, fiber-optic, electro-optic and computed radiography inspection systems.

[P40A / LT830 - Carrier Production Engineering]: The review and approval of any production contract technical documentation, or the separate development of this documentation, to include: Technical Manuals, Planned Maintenance System (PMS), Level III Production Drawings, Provisioning Technical Documentation (PTD), Program Support Data (PSD), and Allowance Parts List (APL); engineering support for final design reviews.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / LT328 - Mobile Cleaning Recovery and Recycle System (MCRRS)]: The Mobile Cleaning, Recovery & Recycling System (MCRRS) is a shipboard heavy duty, self-powered and propelled cleaning vehicle which utilizes pressurized water jet technology, water reclaiming and recycling systems onboard the unit to clean and restore non-skid surfaces on Navy aircraft capable ships. MCRRS will replace the existing obsolete Tennant flight deck scrubber, significantly reduce manpower allocation and materials required to conduct the manual cleaning process utilizing soap and water, and be fielded on all LHA and LHD platforms. Funding will procure units, spares, training, and engineering services support.

[P40A / LT330 - CVN Cybersecurity]: CVN Cyber Security enables the development and installation of Ship Change Documents (SCDs) for Boundary Defense Capability (BDC), Situational Awareness and Physical Security. It will increase the Defense in Depth and improve the Cyber Security aspects of the CVN Nimitz Class HM&E Networks. Funding will be used to update hardware and software applications and system configurations required to be compatible with and meet DoD CYBER requirements, Security Technical Implementation Guide and other CYBER requirements. Funding will also be used to update system cybersecurity Certification and Accreditation. Add capability to protect, detect, and respond/recover to internal system events, and add additional defense in depth and monitoring to external interfaces.

[P40A / LT331 CVN 78 Class Modernization]: CVN 78 funding will cover Contractor Furnished Equipment (CFE) modernizations in future availabilities to include: Dual Band Radar Capacitor Bank, Plastic Waste Compressed Melt Units, Waste Pulpers, Waste disinfection equipment, Plasma Arc Waste Destruction System (PAWDS) Exhaust piping, Vacuum Collection Holding and Transfer (VCHT) pumps, Hangar Bay and Flight Deck Speakers, Machinery Control and Monitoring System upgrades, Steering Control System upgrades, Jet Blast Deflector (JBD) electro mechanical actuators (EMA) and emergency lowering capability, Aviation support efforts (to include: Mission Bay and Ready rooms, MH-60 equipment stowage, Flight equipment stowage/maintenance work center) and Passive Countermeasures System material.

[P40A / LT332-CVN Mobile Cleaning, Recovery & Recycling System (MCRRS)]: The Mobile Cleaning, Recovery & Recycling System (MCRRS) is a shipboard heavy duty, self-powered and propelled cleaning vehicle which utilizes pressurized water jet technology, water reclaiming and recycling systems onboard the unit to clean and restore non-skid surfaces on Navy aircraft capable ships. MCRRS will replace the existing obsolete Tennant flight deck scrubber, significantly reduce manpower allocation and materials required to conduct the manual cleaning process utilizing soap and water, and be fielded on all CVN platforms. Funding will procure units and spares.

[P40A / LT335 CVN Training and Equipment]: LT335 - CVN Training and Equipment
This funding procures spare equipment, propulsion shafts, and propellers with long repair turn-around times to support a change in maintenance philosophy from inspection and repair to remove and replace in order to significantly reduce in-schedule risk to CNO maintenance periods. Funding will be used to replace antiquated equipment and provide a technology refresh in the machine shops on the CVN-68 class carriers. Funding will also be used to replace outmoded and obsolete Training Test Equipment in established Navy schools, as identified in approved or draft Navy Training System Plans (NTSPs) as well as procure state-of-the-art, mobile and reconfigurable instructional facility, positioned at the point of need to support Sailor 2025 and Ready Relevant Learning (RRL).

[P40A / Modernized Personnel Transfer Systems (Cong Add)]: Modernized Personnel Transfer Systems Applicable Ship Class TBD

[P40A / LT999 Centrifuge Testing for Surface Combatants (Cong Add)]: Congressional Add for Centrifuge Testing for Surface Combatants - Funds are provided for the Navy to complete a final review and approval for additional centrifuge purifier providers for surface combatant ships; and AL delegation is requested.

[P3A / LT160 - Machinery Plant Upgrades]: The Machinery Plant Upgrade project within the CVN Fleet Modernization Program (FMP) encompasses CVN Machinery Control Systems, Ship Control (Navigation/ Steering), Integrated Voice Control Networks, Announcing Systems and Shipboard Air Traffic Control Communication Systems. The machinery plant upgrade modernization alterations currently consist of greater than 40 different Ship Change Documents (SCD) with a cost value of approximately $42M for all the alterations combined. Individual SCDs can range in cost from $5K (for software only changes) to ~ $14M for major system upgrade procurements. The range of SCD installs can cost as low as $100k and as high as $4 million for individual SCDs. During each CNO availability, we schedule and complete a subset of these 40+ alterations. Each hull is different receiving varying subsets of the 40+ SCDs depending on individual ship configurations. These alts are scheduled for installation over 3-4 availabilities (which may be 9-12 years) with many installations occurring in later years of the FYDP. Additionally, the machinery plant upgrade program is technology driven and many alterations are still being finalized in the Navy modernization Program (i.e. Ship Change Document (SCD) development) process for installation in later years. New SCDs continue to be developed to proactively address obsolescence issues associated with ever changing technology

[P3A - 2 / LT314 - Carrier Oil Water Separator]: Enhanced Oil Water Separator (OWS) systems are being installed on the CVN68 Class carriers to meet the new environmental discharge law of 15 parts per million (ppm) worldwide. The new OWS systems include an oil content monitor and a bilge stripping structure. The new system is expected to reduce costly maintenance and reliability issues.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P3A - 3 / FMP Ship Units - LSD Davit]: LT322 - LSD Davit
Provide Davit capabilities to meet the Department of Navy's LSD boat requirement for two 11M Rigid Hull Inflatable Boats (RHIBs). Previous requirement was one 7M RHIB and one 11M RHIB. New Davit provides RHIB Launching Capability that meets Mandatory Safety of Life At Sea (SOLAS), Force Protection and Mission Requirements (Amphibious Assault; Anti-Piracy; Visit, Board, Search, and Seizure (VBSS)).

[P3A - 4 / LT327 - Modular Refrigeration System.]: Modular Refrigeration System (MRS) replaces the existing legacy Ship's Stores Refrigeration System (SSRS) onboard CVN68 Class carriers. The legacy system is energy inefficient, space inefficient, and maintenance intensive, requiring highly skilled personnel to operate and maintain acceptable box temperatures. Most hardware associated with the legacy systems is specialized mil-spec and is either becoming unsupportable due to obsolescence, or is grossly expensive to maintain. Each MRS is comprised of a Modular Refrigeration Unit (MRU), an operating/ diagnostic control panel, and small chilled water cooled flat-plate condenser. There are 18 MRUs required per hull. MRS's are self-contained hatchable MRUs with a dedicated control panel that eliminate 90% of current maintenance requirements and require minimal operator support/training.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Items Less than $5M Programs	P-5a			- / 260.155	- / 51.797	- / 37.305	- / 58.149	- / -	- / 58.149
P-3a	1 / LT160 - Machinery Plant Upgrades (TBD)				- / 277.211	- / 19.027	- / 19.407	- / 23.052	- / 0.000	- / 23.052
P-3a	2 / LT314 - Carrier Oil Water Separator (TBD)				- / 24.972	- / 7.000	- / 1.900	- / 4.800	- / 0.000	- / 4.800
P-3a	3 / LT322 - LSD Boat Davit (TBD)				- / 33.895	- / 3.721	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / LT327 - Modular Refrigeration System. (TBD)				- / 13.067	- / 4.500	- / 2.200	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 609.300**	**- / 86.045**	**- / 60.812**	**- / 86.001**	**- / 0.000**	**- / 86.001**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Items Less than $5M Programs	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / LT160 - Machinery Plant Upgrades (TBD)				- / 28.048	- / 24.918	- / 25.288	- / 25.435	Continuing	Continuing
P-3a	2 / LT314 - Carrier Oil Water Separator (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 38.672
P-3a	3 / LT322 - LSD Boat Davit (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 37.616
P-3a	4 / LT327 - Modular Refrigeration System. (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 19.767
P-40	**Total Gross/Weapon System Cost**				**- / 74.152**	**- / 87.454**	**- / 84.539**	**- / 82.429**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
This line item funds baseline programs for items less than $5M.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than $5 Million	Aggregated Items Title: Items Less than $5M Programs

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) LT115 Additive Manufacturing (1)																				
1.1) Additive Manufacturing	A		-	-	-	-	-	-	-	-	-	-	-	1.700	-	-	-	-	-	1.700
Subtotal: 1) LT115 Additive Manufacturing			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***1.700***	**-**	**-**	**-**	**-**	**-**	***1.700***
2) LT060 - MACHALTs																				
2.1) MACHALTs (Amphibs)	A		-	-	19.510	-	-	0.765	-	-	0.781	-	-	0.803	-	-	-	-	-	0.803
2.2) MACHALTs (Surface Ships)	A		-	-	105.820	-	-	7.641	-	-	7.391	-	-	6.680	-	-	-	-	-	6.680
Subtotal: 2) LT060 - MACHALTs			**-**	**-**	***125.330***	**-**	**-**	***8.406***	**-**	**-**	***8.172***	**-**	**-**	***7.483***	**-**	**-**	**-**	**-**	**-**	***7.483***
3) LT110 - Propellers and Shafts - LHA 6 / LHD 8																				
3.1) OD Box - LHA 6 / LHD 8(†)	A		463,000.00	2	0.926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) LT110 - Propellers and Shafts - LHA 6 / LHD 8			**-**	**-**	***0.926***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) LT120 - Carrier Propulsion Plant Inspection																				
4.1) Propulsion Plant Inspection	A		-	-	2.393	-	-	0.170	-	-	0.170	-	-	0.170	-	-	-	-	-	0.170
Subtotal: 4) LT120 - Carrier Propulsion Plant Inspection			**-**	**-**	***2.393***	**-**	**-**	***0.170***	**-**	**-**	***0.170***	**-**	**-**	***0.170***	**-**	**-**	**-**	**-**	**-**	***0.170***
5) LT830 - Carrier Production Engineering																				
5.1) Production Engineering	A		-	-	0.558	-	-	0.040	-	-	0.040	-	-	0.040	-	-	-	-	-	0.040
Subtotal: 5) LT830 - Carrier Production Engineering			**-**	**-**	***0.558***	**-**	**-**	***0.040***	**-**	**-**	***0.040***	**-**	**-**	***0.040***	**-**	**-**	**-**	**-**	**-**	***0.040***
6) LT322 - LSD Davit 3rd Cradle																				
6.1) LSD Davit 3rd Cradle	A		-	-	0.886	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) LT322 - LSD Davit 3rd Cradle			**-**	**-**	***0.886***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
7) LT328 - Mobile Cleaning Recovery and Recycle System (MCRRS)																				
7.1) MCRRS Production Units(†)	A		846,769.23	13	11.008	743,522.00	5	3.718	-	-	-	-	-	-	-	-	-	-	-	-
7.2) MCRRS Engineering Support	A		-	-	2.300	-	-	0.182	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) LT328 - Mobile Cleaning Recovery and Recycle System (MCRRS)			**-**	**-**	***13.308***	**-**	**-**	***3.900***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
8) LT330 - CVN Cybersecurity																				
8.1) LT330 - CVN Cybersecurity (2)	A		-	-	44.754	-	-	17.296	-	-	9.671	-	-	13.183	-	-	-	-	-	13.183

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Aggregated Items Title:** Items Less than $5M Programs

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Subtotal: 8) LT330 - CVN Cybersecurity			**-**	**-**	***44.754***	**-**	**-**	***17.296***	**-**	**-**	***9.671***	**-**	**-**	***13.183***	**-**	**-**	**-**	**-**	**-**	***13.183***
9) LT331 CVN 78 Class Modernization																				
9.1) LT 331 CVN78 CL [3]	A		-	-	52.742	-	-	16.385	-	-	12.542	-	-	28.473	-	-	-	-	-	28.473
Subtotal: 9) LT331 CVN 78 Class Modernization			**-**	**-**	***52.742***	**-**	**-**	***16.385***	**-**	**-**	***12.542***	**-**	**-**	***28.473***	**-**	**-**	**-**	**-**	**-**	***28.473***
10) LT332-CVN Mobile Cleaning, Recovery & Recycling System (MCRRS)																				
10.1) LT332-CVN Mobile Cleaning, Recovery & Recycling System (MCRRS)	A		-	-	19.258	-	-	1.600	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 10) LT332-CVN Mobile Cleaning, Recovery & Recycling System (MCRRS)			**-**	**-**	***19.258***	**-**	**-**	***1.600***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
11) LT335 CVN Training and Equipment																				
11.1) CVN Training and Equipment [4]	A		-	-	-	-	-	-	-	-	6.710	-	-	7.100	-	-	-	-	-	7.100
Subtotal: 11) LT335 CVN Training and Equipment			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***6.710***	**-**	**-**	***7.100***	**-**	**-**	**-**	**-**	**-**	***7.100***
12) Modernized Personnel Transfer Systems (Cong Add)																				
12.1) Modernized Personnel Transfer Systems [5]	A		-	-	-	-	-	3.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 12) Modernized Personnel Transfer Systems (Cong Add)			**-**	**-**	***0.000***	**-**	**-**	***3.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
13) LT999 Centrifuge Testing for Surface Combatants (Cong Add)																				
13.1) Centrifuge Testing for Surface Combatants [6]	A		-	-	-	-	-	1.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 13) LT999 Centrifuge Testing for Surface Combatants (Cong Add)			**-**	**-**	***0.000***	**-**	**-**	***1.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**260.155**	**-**	**-**	**51.797**	**-**	**-**	**37.305**	**-**	**-**	**58.149**	**-**	**-**	**-**	**-**	**-**	**58.149**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(1) Additive Manufacturing (AM) program to procure and install AM Equipment on Navy Platforms to increase Self-Sufficiency.

(2) The increase from FY23 to FY24 is necessary to address significant cybersecurity gaps identified on Ford Class Aircraft Carriers (and not included in the original cybersecurity funding controls). Effort provides cybersecurity for carrier assets and infrastructure with emphasis to prevent network intrusion on CVNs. Efforts consists of (1) boundary defense mods, (2) situational awareness mods and (3) physical security mods. Quantities vary per hull and are fundamentally different; therefore not shown since not suited for comparison. Hulls will receive different mods in varying combinations; so each hull cost is mutually exclusive of others costs.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Aggregated Items Title:** Items Less than $5M Programs

(3) The increase from FY23 to FY24 reflects the planning, design and material procurement efforts to support the CVN78 FY26 PIA. Significant modernization efforts include Advanced Weapons Elevators, Ships control/steering system, Machinery Control and Monitoring System upgrades, and Hangar Bay and Flight Deck speaker systems.

(4) The increase from FY23 to FY24 supports training and equipment requirements which vary from year to year depending on the specific Aircraft Carrier systems and training equipment requiring upgrades. In addition, the items being procured for the rotatable material pool varies each year (shafting and equipment that has long repair turn-around times procured to support a remove/replace vice an inspect/repair maintenance to reduce schedule risk during CNO availabilities).

(5) Congressional Add for Modernized Personnel Transfer Systems.

(6) Congressional Add for Centrifuge Testing for Surface Combatants.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Aggregated Items:** Items Less than $5M Programs

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty *(Each)*	Unit Cost *($)*	Specs Avail Now?	Date Revision Available	RFP Issue Date
3) LT110 - Propellers and Shafts - LHA 6 / LHD 8												
3.1) OD Box - LHA 6 / LHD 8		2020	ROLLS ROYCE / MS	C / FP	NAVSUP	Apr 2020	Apr 2022	2	463,050.00	Y		
7) LT328 - Mobile Cleaning Recovery and Recycle System (MCRRS)												
7.1) MCRRS Production Units		2022	Triverus, LLC / Palmer, AK	C / FFP	Palmer, AK	Mar 2022	Mar 2023	5	743,522.00	Y		

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 1 / LT160 - Machinery Plant Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	277.211	19.027	19.407	23.052	0.000	23.052	28.048	24.918	25.288	25.435	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	277.211	19.027	19.407	23.052	0.000	23.052	28.048	24.918	25.288	25.435	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**277.211**	**19.027**	**19.407**	**23.052**	**0.000**	**23.052**	**28.048**	**24.918**	**25.288**	**25.435**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

LT160 - MACHINERY PLANT UPGRADES - The Machinery Plant Upgrade project within the CVN Fleet Modernization Program (FMP) encompasses CVN Machinery Control Systems, Ship Control (Navigation/ Steering), Integrated Voice Control Networks, Announcing Systems and Shipboard Air Traffic Control Communication Systems. The machinery plant upgrade modernization alterations currently consist of greater than 40 different Ship Change Documents (SCD) with a cost value of approximately $42M for all the alterations combined. Individual SCDs can range in cost from $5K (for software only changes) to ~ $14M for major system upgrade procurements. The range of SCD installs can cost as low as $100K and as high as $4M for individual SCDs. During each CNO availability, we schedule and complete a subset of these 40+ alterations. Each hull is different receiving varying subsets of the 40+ SCDs depending on individual ship configurations. These alts are scheduled for installation over 3-4 availabilities (which may be 9-12 years) with many installations occurring in later years of the FYDP. Additionally, the machinery plant upgrade program is technology driven and many alterations are still being finalized in the Navy modernization Program (i.e. Ship Change Document (SCD) development) process for installation in later years. New SCDs continue to be developed to proactively address obsolescence issues associated with ever changing technology.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 1 / LT160 - Machinery Plant Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: Machinery Plant Upgrades	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: LT160 - Machinery Plant Upgrades												
B Kits												
Recurring												
1.1.1) Machinery Plant Upgrades - NonOrganic (7)	44 / 101.921	4 / 7.474	4 / 7.623	4 / 8.954	- / -	4 / 8.954	4 / 9.731	4 / 8.712	4 / 8.747	4 / 8.844	Continuing	Continuing
Subtotal: Recurring	*- / 101.921*	*- / 7.474*	*- / 7.623*	*- / 8.954*	*- / -*	*- / 8.954*	*- / 9.731*	*- / 8.712*	*- / 8.747*	*- / 8.844*	*Continuing*	*Continuing*
Subtotal: LT160 - Machinery Plant Upgrades	*44 / 101.921*	*4 / 7.474*	*4 / 7.623*	*4 / 8.954*	*- / -*	*4 / 8.954*	*4 / 9.731*	*4 / 8.712*	*4 / 8.747*	*4 / 8.844*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 101.921*	*- / 7.474*	*- / 7.623*	*- / 8.954*	*- / -*	*- / 8.954*	*- / 9.731*	*- / 8.712*	*- / 8.747*	*- / 8.844*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 1: LT160 - Machinery Plant Upgrades	- / 175.290	- / 11.553	- / 11.784	- / 14.098	- / 0.000	- / 14.098	- / 18.317	- / 16.206	- / 16.541	- / 16.591	- / 0.000	- / 280.380
Subtotal: Installation	*- / 175.290*	*- / 11.553*	*- / 11.784*	*- / 14.098*	*- / -*	*- / 14.098*	*- / 18.317*	*- / 16.206*	*- / 16.541*	*- / 16.591*	*- / 0.000*	*- / 280.380*
Total												
Total Cost (Procurement + Support + Installation)	**277.211**	**19.027**	**19.407**	**23.052**	**0.000**	**23.052**	**28.048**	**24.918**	**25.288**	**25.435**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 1 / LT160 - Machinery Plant Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: LT160 - Machinery Plant Upgrades

Manufacturer Information

Manufacturer Name: various	Manufacturer Location: various
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 5

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Nov 2021	Nov 2022	Nov 2023				
Delivery Dates	Apr 2022	Apr 2023	Apr 2024				

Installation Information

Method of Implementation: AIT:: Installation Name: Machinery Plant Upgrades

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	42 / 170.800	2 / 4.684	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	44 / 175.484
FY 2022	0 / 4.490	2 / 4.369	2 / 4.795	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 13.654
FY 2023	- / -	0 / 2.500	2 / 4.794	2 / 5.346	0 / 0.000	2 / 5.346	- / -	- / -	- / -	- / -	0 / 0.000	4 / 12.640
FY 2024	- / -	- / -	0 / 2.195	2 / 5.352	0 / 0.000	2 / 5.352	2 / 7.481	- / -	- / -	- / -	0 / 0.000	4 / 15.028
FY 2025	- / -	- / -	- / -	0 / 3.400	0 / 0.000	0 / 3.400	2 / 7.448	2 / 7.103	- / -	- / -	0 / 0.000	4 / 17.951
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.388	2 / 7.103	2 / 7.270	- / -	0 / 0.000	4 / 17.761
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.000	2 / 7.271	2 / 8.295	0 / 0.000	4 / 17.566
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.000	2 / 8.296	2 / 0.000	4 / 10.296
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	42 / 175.290	4 / 11.553	4 / 11.784	4 / 14.098	0 / 0.000	4 / 14.098	4 / 18.317	4 / 16.206	4 / 16.541	4 / 16.591	2 / 0.000	72 / 280.380

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	42	-	2	-	2	-	2	1	1	-	1	2	1	-	1	2	1	-	1	2	1	-	1	1	2	-	1	1	2	2	72
Out	40	1	-	2	-	1	1	1	1	-	1	1	-	1	1	2	-	1	1	1	-	1	1	1	-	-	-	1	1	11	72

Footnotes:

(7) The increase from FY23 to FY24 reflects the inclusion of high cost SCDs - the material procurement for SCD 15616 (wireless interior communications) for CVN72 and the installation of Weapons Elevator Control System technology refresh and Navigation Critical Distribution System upgrades on CVN77. Installation funds are required in the year prior to install for Design Services Allocation - DSA - (hull planning yard ship checks, installation drawing development), Advanced Planning, and Integrated Logistics Support (ILS).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 2 / LT314 - Carrier Oil Water Separator
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	24.972	7.000	1.900	4.800	0.000	4.800	0.000	0.000	0.000	0.000	0.000	38.672
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	24.972	7.000	1.900	4.800	0.000	4.800	0.000	0.000	0.000	0.000	0.000	38.672
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**24.972**	**7.000**	**1.900**	**4.800**	**0.000**	**4.800**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**38.672**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Enhanced Oil Water Separator (OWS) systems are being installed on the CVN68 Class carriers to meet the new environmental discharge law of 15 parts per million (ppm) worldwide. The new OWS systems include an oil content monitor and a bilge stripping structure. The new system is expected to reduce costly maintenance and reliability issues.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 2 / LT314 - Carrier Oil Water Separator
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: Carrier Oil Water Separator	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: LT314 - Carrier Oil Water Separator												
B Kits												
Recurring												
1.1.1) Oil Water Separator - NonOrganic [8]	11 / 6.360	- / -	2 / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 7.560
Subtotal: Recurring	*- / 6.360*	*- / -*	*- / 1.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 7.560*
Subtotal: LT314 - Carrier Oil Water Separator	*11 / 6.360*	*- / -*	*2 / 1.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*13 / 7.560*
Subtotal: Procurement, All Modification Items	*- / 6.360*	*- / -*	*- / 1.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 7.560*
Installation												
Modification Item 1 of 1: LT314 - Carrier Oil Water Separator	- / 18.612	- / 7.000	- / 0.700	- / 4.800	- / 0.000	- / 4.800	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 31.112
Subtotal: Installation	*- / 18.612*	*- / 7.000*	*- / 0.700*	*- / 4.800*	*- / -*	*- / 4.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 31.112*
Total												
Total Cost (Procurement + Support + Installation)	**24.972**	**7.000**	**1.900**	**4.800**	**0.000**	**4.800**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**38.672**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 2 / LT314 - Carrier Oil Water Separator
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: LT314 - Carrier Oil Water Separator

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Nov 2022					
Delivery Dates		Nov 2023					

Installation Information

Method of Implementation: AIT:: Installation Name: Oil Water Separator

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	8 / 18.612	3 / 7.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 25.612
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	0 / 0.700	2 / 4.800	0 / 0.000	2 / 4.800	- / -	- / -	- / -	- / -	0 / 0.000	2 / 5.500
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	8 / 18.612	3 / 7.000	0 / 0.700	2 / 4.800	0 / 0.000	2 / 4.800	- / -	- / -	- / -	- / -	0 / 0.000	13 / 31.112

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	8	-	-	3	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Out	8	-	-	-	-	1	-	2	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13

Footnotes:

(8) The Change from FY23 to FY24 reflects the completion of procurement efforts in FY23 and the corresponding increase in installation effort (of the procured material) in FY24. This completes the OWS mod program on CVN68 CL Carriers. Installation funds are required in the year prior to install for DSA for hull planning yard ship checks, installation drawing development, Advanced Planning, and Integrated Logistics Support (ILS).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 3 / LT322 - LSD Boat Davit
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	33.895	3.721	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.616
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	33.895	3.721	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.616
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**33.895**	**3.721**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**37.616**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[FMP Ship Units - LSD Davit] This SHIPALT replaces the Welin Lambie LUM 12A or Lakeshore Gravity Boat Davit currently installed on LSD 41/49 Class ships, with a new Slewing Arm Davit (SLAD) from Oldenburg Group Inc. The existing systems will be removed and the OGI SLAD will be installed in the same general location of the current systems. The new system is a SLAD design with single point pick up of the boats versus the two point pick up used by the existing systems.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 3 / LT322 - LSD Boat Davit
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: LT322 - LSD Boat Davit												
B Kits												
Recurring												
1.1.1) FMP Ship Units - LSD Davit - NonOrganic	9 / 10.440	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 10.440
1.1.2) End Item Spares - Organic - Organic	- / 0.061	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.061
1.1.3) Support - Organic	- / -	- / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500
Subtotal: Recurring	*- / 10.501*	*- / 0.500*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 11.001*
Subtotal: LT322 - LSD Boat Davit	*9 / 10.501*	*- / 0.500*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*9 / 11.001*
Subtotal: Procurement, All Modification Items	*- / 10.501*	*- / 0.500*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 11.001*
Installation												
Modification Item 1 of 1: LT322 - LSD Boat Davit	- / 23.394	- / 3.221	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 26.615
Subtotal: Installation	*- / 23.394*	*- / 3.221*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 26.615*
Total												
Total Cost (Procurement + Support + Installation)	**33.895**	**3.721**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**37.616**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 3 / LT322 - LSD Boat Davit

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: LT322 - LSD Boat Davit

Manufacturer Information

Manufacturer Name: Oldenburg Group Inc | Manufacturer Location: Iron River, MI

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Industrial/AIT:: Installation Name: FMP Ship Units - LSD Davit

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	7 / 23.394	1 / 3.221	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 26.615
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 23.394	1 / 3.221	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 26.615

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	9
Out	6	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	9

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 4 / LT327 - Modular Refrigeration System.
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	13.067	4.500	2.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.767
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	13.067	4.500	2.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.767
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**13.067**	**4.500**	**2.200**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**19.767**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[Modular Reefer System] Modular Refrigeration System (MRS) replaces the existing legacy ship's stores refrigeration system (SSRS) onboard CVN68 class carriers. The legacy system is energy inefficient, space inefficient, and maintenance intensive, requiring highly skilled personnel to operate and maintain acceptable box temperatures. Most hardware associated with the legacy systems is specialized mil-spec and is either becoming unsupportable due to obsolescence, or is grossly expensive to maintain. Each Modular Refrigeration System (MRS) is comprised of a Modular Refrigeration Unit (MRU), an operating/ diagnostic control panel, and small chilled water cooled flat-plate condenser. There are 18 MRUs required per hull. Modular Refrigeration Systems (MRS's) are self-contained hatchable modular refrigeration units (MRU) with a dedicated control panel that eliminate 90% of current maintenance requirements and require minimal operator support/training.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 4 / LT327 - Modular Refrigeration System.
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: LT327 - Modular Refrigeration System.												
B Kits												
Recurring												
1.1.1) Modular Reefer System - NonOrganic (9)	51 / 8.000	18 / 2.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	69 / 10.300
Subtotal: Recurring	*- / 8.000*	*- / 2.300*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 10.300*
Subtotal: LT327 - Modular Refrigeration System.	*51 / 8.000*	*18 / 2.300*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*69 / 10.300*
Subtotal: Procurement, All Modification Items	*- / 8.000*	*- / 2.300*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 10.300*
Installation												
Modification Item 1 of 1: LT327 - Modular Refrigeration System.	- / 5.067	- / 2.200	- / 2.200	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 9.467
Subtotal: Installation	*- / 5.067*	*- / 2.200*	*- / 2.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 9.467*
Total												
Total Cost (Procurement + Support + Installation)	**13.067**	**4.500**	**2.200**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**19.767**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0981 / Items less than $5 Million	**Modification Number / Title:** 4 / LT327 - Modular Refrigeration System.

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: LT327 - Modular Refrigeration System.

Manufacturer Information

Manufacturer Name: DRS Marlo Coil | Manufacturer Location: High Ridge, MO

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 10

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021						
Delivery Dates	Oct 2022						

Installation Information

Method of Implementation: AIT:: Installation Name: Modular Reefer System

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	33 / 5.067	18 / 1.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	51 / 6.967
FY 2022	- / -	0 / 0.300	18 / 2.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	18 / 2.500
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	33 / 5.067	18 / 2.200	18 / 2.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	69 / 9.467

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	33	-	18	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69
Out	15	18	-	-	18	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69

Footnotes:

(9) The Change from FY23 to FY24 reflects the completion of installations of Modular Refrigeration Systems in FY23. This completes the OWS mod program on in-Service CVN68 CL Carriers.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	10.027	2.429	3.202	3.288	0.000	3.288	3.317	3.392	3.459	3.533	48.804	81.451
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	10.027	2.429	3.202	3.288	0.000	3.288	3.317	3.392	3.459	3.533	48.804	81.451
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**10.027**	**2.429**	**3.202**	**3.288**	**0.000**	**3.288**	**3.317**	**3.392**	**3.459**	**3.533**	**48.804**	**81.451**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

CHEMICAL & BIOLOGICAL DEFENSE PROGRAM (INSTALLATION REQUIREMENTS):
Public Law 103-160, Section 1703 created a Joint Service Chemical and Biological Defense Program (CBDP) to address ever growing threats from the aggressive proliferation of chemical and biological weapons. Joint CBDP funds the development and procurement of Chemical and Biological Defense (CBD) Equipment to enhance the warfighter's ability to survive and complete their mission in a chemical biological contaminated environment. The Navy is responsible for the associated installation/integration and sustainment funds only. The Navy's requirement for Joint Biological Point Detection System (JBPDS), Improved Point Detection System/Lifecycle Replacement (IPDS/LR), Joint Biological Agent Identification and Diagnostic System (JBAIDS), Aerosol Vapor Chemical Agent Detector (AVCAD), Enhanced Maritime Biological Detection (EMBD) system, Next Generation Chemical Detector, CBRN Dismounted Reconnaissance Sets, Kits, and Outfits (DRSKO), Joint Warning and Reporting Network 2 (JWARN 2) and Joint Effects Model 2 has been validated by CNO in associated Joint Operational Requirements Documents and/or Capability Production Documents.

MAJOR CHANGES

Realigned $150K FY23 funds from AVCAD to EMBD Upgrades due to Joint program delays with system development and delivery of AVCAD.

The Navy cancelled the DRSKO Upgrade starting in FY22.

The Navy cancelled the JWARN 2 & JEM 2 Upgrade efforts starting in FY22.

Installation of Equipment
Funding is for installation of equipment including Fleet Modernization Program installations, installation of training equipment, installation of equipment in other shore facilities, and associated required new equipment training. Procurement of equipment is funded by the Joint Service CBDP.

Costs can vary significantly, even within ship class, depending on installation location (East coast, West coast, OCONUS, etc.), if installation accomplished pier side or in a shipyard (i.e., availability type during which installation actually occurs), ship as built and as found conditions, and installation growth work (i.e., unplanned/unexpected work) driven by as found conditions.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P3A / JBAIDS]: The JBAIDS will provide U.S. operating forces with a biological organism identification and diagnostic device that will identify and quantify biological organisms of operational concern and other pathogens of clinical significance for confirmatory and prognostic purposes. Inventory objective for shipboard JBAIDS installations is 23 and Refrigeration installations is 17.

[P3A - 2 / AVCAD*]: The AVCAD (formerly NGCD), is a technology replacement for the IPDS-LR system. The inventory objective for shipboard installations is 169.

[P3A - 3 / IPDS-LR Heater]: IPDS-LR Heater]: The IPDS-LR Heater Upgrade provides the ability for IPDS-LR to function in various extreme environmental conditions that may cause system degradation and ultimately failure. This is a new, emergent requirement to ensure automated chemical agent detection is operationally available. The Navy is required to fund the integration and installation. Inventory objective for shipboard installations is 77.

[P3A - 4 / CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE]: The CBRN Dismounted Reconnaissance Sets, Kits, and Outfits (DRSKO) consists of portable, commercial and government off-the-shelf equipment which provides Visit Board Search and Seizure (VBSS) forces with the capability to detect or deny the presence of Weapons of Mass Destruction (WMD) in support of WMD Interdiction (WMD-I) missions. This installation will install shelving and provide controlled access to support proper stowage of the Joint developed CBRN DRSKO system. The inventory objective for shipboard installations is 2.

[P3A - 5 / CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT]: OPNAVINST 3400.10G articulates U.S. Navy Chemical, Biological and Radiological Defense (CBRD) policy and establishes functional responsibilities to ensure the highest level of the Fleet readiness and warfighting sustainability in a CBR environment. The Enhanced Maritime Biological Detection (EMBD) kit is intended as a lifecycle replacement for the JBPDS system, and will include improved detection and identification capabilities. The equipment procurement is funded out of the Joint Service Chemical Biological Defense Program Budget. The inventory objective for shipboard installations is 118.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS (TBD)				- / 5.186	- / 0.115	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.450	- / 0.000	- / 0.450
P-3a	3 / CW001 CHEMICAL WARFARE PROGRAM IPDS-LR HEATER UPGRADE (TBD)				- / 2.678	- / 0.541	- / 0.144	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE (TBD)				- / 0.961	- / 0.220	- / 0.240	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT (TBD)				- / 1.202	- / 1.553	- / 2.818	- / 2.838	- / 0.000	- / 2.838
P-40	**Total Gross/Weapon System Cost**				**- / 10.027**	**- / 2.429**	**- / 3.202**	**- / 3.288**	**- / 0.000**	**- / 3.288**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 5.301
P-3a	2 / CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS) (TBD)				- / 1.001	- / 1.184	- / 1.893	- / 3.533	- / 48.804	- / 56.865
P-3a	3 / CW001 CHEMICAL WARFARE PROGRAM IPDS-LR HEATER UPGRADE (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.363
P-3a	4 / CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.421
P-3a	5 / CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT (TBD)				- / 2.316	- / 2.208	- / 1.566	- / 0.000	- / 0.000	- / 14.501
P-40	**Total Gross/Weapon System Cost**				**- / 3.317**	**- / 3.392**	**- / 3.459**	**- / 3.533**	**- / 48.804**	**- / 81.451**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 1 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	5.186	0.115	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.301
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	5.186	0.115	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.301
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**5.186**	**0.115**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**5.301**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPNAVINST 3400.10G articulates U.S. Navy Chemical, Biological and Radiological Defense (CBRD) policy and establishes functional responsibilities to ensure the highest level of the Fleet readiness and warfighting sustainability in a CBR environment. JBAIDS systems will identify and quantify biological organisms of operational concern and other pathogens of clinical significance for confirmatory and prognostic purposes. The CENTCOM HR urgent need (dated Aug 2009) modifies the JBAIDS ORD (dated May 2003) with the addition of detection capability for the 2009/A/H1N1 influenza. The equipment procurement is funded out of the Joint Service CBDP Budget P-1 Item Nomenclature: JBAIDS. Beginning in FY13, system will install with refrigeration unit.

[JBAIDS] Remarks: A total of twenty two (22) completed of twenty three (23) planned. System installation onboard LHA 7 is awaiting shock qualification of new Biological Safety Cabinet (BSC) and approval of ship installation drawings due to new BSC. The planned LHA-7 installation supports shock qualified installation of the BSC and tie downs to store the follow-on system to JBAIDS, Next Generation Diagnostic System (NGDS), by using the same ship alteration.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 1 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBAIDS												
B Kits												
Non-Recurring												
1.1.1) JBAIDS - NonOrganic [1]	22 / 0.000	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.000
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Subtotal: CW001 CHEMICAL WARFARE PROGRAM JBAIDS	*22 / 0.000*	*1 / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*23 / 0.000*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Installation												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBAIDS	- / 5.186	- / 0.115	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 5.301
Subtotal: Installation	*- / 5.186*	*- / 0.115*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.301*
Total												
Total Cost (Procurement + Support + Installation)	**5.186**	**0.115**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**5.301**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 1 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBAIDS

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: JBAIDS

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	22 / 5.186	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	22 / 5.186
FY 2022	- / -	1 / 0.115	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.115
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	22 / 5.186	1 / 0.115	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	23 / 5.301

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	22	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Out	22	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23

Footnotes:

(1) There are no equipment procurement costs with any detector system installed. The Design Service Allocation (DSA) costs are for government engineering oversight/support in preparation for ship installation and ship class planning yards for engineering services which include ship check, development and approval of ship installation drawings (SIDs), Ship Selected Record changes, Bill of Material (BOM), onsite planning yard engineering support during installation to answer liaison action record (LARs), and other engineering services depending on the planning yard. DSA costs are generally funded up to one year prior

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 1 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

to planned installation due to drawing development lead time and installation preparation efforts. These costs are ship specific since drawings are developed for each ship, not class of ship. - FY22 funded installations include one LHA-6 Class ship at $115K.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 2 / CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.450	0.000	0.450	1.001	1.184	1.893	3.533	48.804	56.865
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.450	0.000	0.450	1.001	1.184	1.893	3.533	48.804	56.865
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.450**	**0.000**	**0.450**	**1.001**	**1.184**	**1.893**	**3.533**	**48.804**	**56.865**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPNAVINST 3400.10G articulates U.S. Navy Chemical, Biological and Radiological Defense (CBRD) policy and establishes functional responsibilities to ensure the highest level of the Fleet readiness and warfighting sustainability in a CBR environment. The Aerosol Vapor Chemical Agent Detector (AVCAD), formerly Next Generation Chemical Detector (NGCD), provides shipboard point detection system for detecting and identifying nerve and blister agent contamination presence. The equipment procurement is funded out of the Joint Service Chemical Biological Defense Program Budget.

[AVCAD*] Remarks: The Aerosol Vapor Chemical Agent Detector (AVCAD), formerly Next Generation Chemical Detector (NGCD), is a technology replacement for the IPDS-LR system. The program consists of four variants for multiple applications; the Navy will be installing variant 1 for fixed chemical agent detection capability. The inventory objective for shipboard installations is 169. Previously, installations were expected to start in FY24 with advance planning activities (DSA) to start in FY23, but Joint program delays now expect AVCAD fielding to Navy to commence in late FY25, necessitating Navy change planned installations to start in fourth quarter FY25 with DSA costs starting in FY24. Subsequently, $150K FY23 funding was realigned from AVCAD and shifted to support EMBD Upgrade kit installation in FY23. AVCAD installation schedule has been adjusted to reflect the Joint program delay of AVCAD delivery.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 2 / CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Models of Systems Affected: [No Model Specified] **Modification Type:** TBD **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS)												
B Kits												
Recurring												
1.1.1) AVCAD* - NonOrganic [2]	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.000	4 / 0.000	5 / 0.000	10 / 0.000	147 / 0.000	169 / 0.000
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Subtotal: CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*3 / 0.000*	*4 / 0.000*	*5 / 0.000*	*10 / 0.000*	*147 / 0.000*	*169 / 0.000*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Installation												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS)	- / 0.000	- / 0.000	- / 0.000	- / 0.450	- / 0.000	- / 0.450	- / 1.001	- / 1.184	- / 1.893	- / 3.533	- / 48.804	- / 56.865
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.450*	*- / -*	*- / 0.450*	*- / 1.001*	*- / 1.184*	*- / 1.893*	*- / 3.533*	*- / 48.804*	*- / 56.865*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.450**	**0.000**	**0.450**	**1.001**	**1.184**	**1.893**	**3.533**	**48.804**	**56.865**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 2 / CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS)

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: AVCAD*

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	0 / 0.450	0 / 0.000	0 / 0.450	3 / 0.723	- / -	- / -	- / -	0 / 0.000	3 / 1.173
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.278	4 / 0.972	- / -	- / -	0 / 0.000	4 / 1.250
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.212	5 / 1.225	- / -	0 / 0.000	5 / 1.437
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.668	10 / 2.480	0 / 0.000	10 / 3.148
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.053	147 / 48.804	147 / 49.857
Total	- / -	- / -	- / -	0 / 0.450	0 / 0.000	0 / 0.450	3 / 1.001	4 / 1.184	5 / 1.893	10 / 3.533	147 / 48.804	169 / 56.865

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	1	1	1	1	1	1	2	2	2	3	3	147	169
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	1	1	1	1	1	1	2	2	2	3	3	147	169

Footnotes:

(2) There are no equipment procurement costs with any detector system installed. The Design Service Allocation (DSA) costs are for government engineering oversight/support in preparation for ship installation and ship class planning yards for engineering services which include ship check, development and approval of ship installation drawings (SIDs), Ship Selected Record changes, Bill of Material (BOM), onsite

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 2 / CW001 CHEMICAL WARFARE PROGRAM AVCAD (FORMERLY NGDS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

planning yard engineering support during installation to answer liaison action record (LARs), and other engineering services depending on the planning yard. DSA costs are generally funded up to one year prior to planned installation due to drawing development lead time and installation preparation efforts. These costs are ship specific since drawings are developed for each ship, not class of ship. - $150K FY23 realigned from AVCAD to EMBD Upgrades due to Joint delays with AVCAD development and delivery. - $0 FY23 funding due to realigned from AVCAD to EMBD Upgrades.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 3 / CW001 CHEMICAL WARFARE PROGRAM IPDS-LR HEATER UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2.678	0.541	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.363
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2.678	0.541	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.363
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2.678**	**0.541**	**0.144**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**3.363**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPNAVINST 3400.10G articulates U.S. Navy CBRD policy and establishes functional responsibilities to ensure the highest level of the Fleet readiness and warfighting sustainability in a CBR environment. CBRD Improved Point Detection System Heater Upgrade (IPDS-LR HU) provides the ability for IPDS-LR to function in various extreme environmental conditions that may cause system degradation and ultimately failure. This is a new, emergent requirement to ensure automated chemical agent detection is operationally available. The equipment development and procurement for this upgrade is funded out of the Joint Service CBDP Budget.

[IPDS-LR Heater] Remarks: A total of sixty (60) installations completed of seventy-seven (77) planned.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 3 / CW001 CHEMICAL WARFARE PROGRAM IPDS-LR HEATER UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM IPDS-LR HEATER UPGRADE												
B Kits												
Recurring												
1.1.1) IPDS-LR Heater - NonOrganic (3)	53 / 0.000	20 / 0.000	4 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	77 / 0.000
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Subtotal: CW001 CHEMICAL WARFARE PROGRAM IPDS-LR HEATER UPGRADE	*53 / 0.000*	*20 / 0.000*	*4 / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*77 / 0.000*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Installation												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM IPDS-LR HEATER UPGRADE	- / 2.678	- / 0.541	- / 0.144	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.363
Subtotal: Installation	*- / 2.678*	*- / 0.541*	*- / 0.144*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.363*
Total												
Total Cost (Procurement + Support + Installation)	**2.678**	**0.541**	**0.144**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**3.363**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 3 / CW001 CHEMICAL WARFARE PROGRAM IPDS-LR HEATER UPGRADE

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM IPDS-LR HEATER UPGRADE

Installation Information

Method of Implementation: [none specified]:: Installation Name: IPDS-LR Heater

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	45 / 2.678	8 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	53 / 2.678
FY 2022	- / -	20 / 0.541	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 0.541
FY 2023	- / -	- / -	4 / 0.144	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.144
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	45 / 2.678	28 / 0.541	4 / 0.144	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	77 / 3.363

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	45	5	6	4	13	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77
Out	45	5	6	4	13	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77

Footnotes:

(3) IPDS-LR Heater Upgrade plan - The procurement costs are specifically referring to Installation and Design Service Allocation (DSA) costs as there are no equipment procurement costs with any detector system installed. DSA costs are for government engineering oversight/support in preparation for ship installation and ship class planning yards for engineering services which include ship check, development and approval of ship installation drawings (SIDs), Ship Selected Record changes, Bill of Material (BOM), onsite planning yard engineering support during installation to answer liaison action record (LARs), and other engineering services depending on the planning yard. DSA costs are generally funded up to one year prior to planned installation due to drawing development lead time and installation preparation efforts. These costs are ship specific since drawings are developed for each ship, not class of ship. - Funded installations in FY23 decreased from twelve (12) to four because eight of the previously planned in FY23 are being accomplished in FY22. $240K FY23 funds realigned to support EMBD Kit upgrades. - FY23 funded installations total four at $36K each. Costs include three CVN-68 class ships and one LHD-1 class ship. Total FY23 installation cost is $144K.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 4 / CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.961	0.220	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.421
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.961	0.220	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.421
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.961**	**0.220**	**0.240**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1.421**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPNAVINST 3400.10G articulates U.S. Navy Chemical, Biological and Radiological Defense (CBRD) policy and establishes functional responsibilities to ensure the highest level of the Fleet readiness and warfighting sustainability in a CBR environment. Chemical Biological Radiological Nuclear Dismounted Reconnaissance Sets, Kits, and Outfits (CBRN DRSKO) provides Navy Boarding Teams personnel protection from current and emerging CBRN hazards through detection, identification, sample collection, decontamination, marking, and hazard reporting for CBRN threats. Due to system size and storage requirements of equipment and materials, a ship alteration must be accomplished for adequate shelving, electrical power, ventilation, and stowage space security. The equipment procurement is funded out of the Joint Service Chemical Biological Defense Program Budget.

[CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE] Remarks: Planned installations decreased from four to two with the removal of LSD and CG class ships from plan. The planned installation for LSD and CG class ships was cancelled since Navy is actively decommisioning the ship classes. Planned installations now include one for DDG class (completed) and one for LPD class ships.

FY23 planned installations include one LPD-17 class ship.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 4 / CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE												
B Kits												
Recurring												
1.1.1) CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE - NonOrganic (4)	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Subtotal: CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE	*1 / 0.000*	*- / -*	*1 / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*2 / 0.000*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Installation												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE	- / 0.961	- / 0.220	- / 0.240	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.421
Subtotal: Installation	*- / 0.961*	*- / 0.220*	*- / 0.240*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.421*
Total												
Total Cost (Procurement + Support + Installation)	**0.961**	**0.220**	**0.240**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1.421**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 4 / CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE

Installation Information

Method of Implementation: [none specified]:: Installation Name: CW001 CHEMICAL WARFARE PROGRAM DRSKO STOWAGE

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 0.961	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.961
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	0 / 0.220	1 / 0.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.460
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.961	0 / 0.220	1 / 0.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.421

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Footnotes:

(4) Dismounted Reconnaissance Sets, Kits, and Outfits (DRSKO) Stowage plan - The procurement costs are specifically referring to Installation and Design Service Allocation (DSA) costs as there are no equipment procurement costs with any detector system installed. DSA costs are for government engineering oversight/support in preparation for ship installation and ship class planning yards for engineering services which include ship check, development and approval of ship installation drawings (SIDs), Ship Selected Record changes, Bill of Material (BOM), onsite planning yard engineering support during installation to answer liaison action record (LARs), and other engineering services depending on the planning yard. DSA costs are generally funded up to one year prior to planned installation due to drawing development lead time and installation preparation efforts. These costs are ship specific since drawings are developed for each ship, not class of ship. - FY23 funded installations total one for LPD-17 class ship at $240K.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 5 / CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1.202	1.553	2.818	2.838	0.000	2.838	2.316	2.208	1.566	0.000	0.000	14.501
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1.202	1.553	2.818	2.838	0.000	2.838	2.316	2.208	1.566	0.000	0.000	14.501
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1.202**	**1.553**	**2.818**	**2.838**	**0.000**	**2.838**	**2.316**	**2.208**	**1.566**	**0.000**	**0.000**	**14.501**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPNAVINST 3400.10G articulates U.S. Navy Chemical, Biological and Radiological Defense (CBRD) policy and establishes functional responsibilities to ensure the highest level of the Fleet readiness and warfighting sustainability in a CBR environment. The Enhanced Maritime Biological Detection (EMBD) kit is intended as a lifecycle replacement for the JBPDS system, and will include improved detection and identification capabilities. The equipment procurement is funded out of the Joint Service Chemical Biological Defense Program Budget. The inventory objective for shipboard installations is 117.

[CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT] Remarks: EMBD is a new acquisition program developed and procured thru JPEO-CBD which will provide lifecycle replacement kits for existing JBPDS systems. The EMBD kit installs within the existing JBPDS frame as specific line replaceable units (LRUs) addressing certain parts obsolescence issues and provides hardware and software upgrades to the system. EMBD kit installation timeline is expected to take approximately six days to account for LRU removal, perform LRU operability assessment for LRUs remaining in the system, and perform legacy LRU refurbishment in line with each EMBD kit installation to ensure proper operation upon completion of the upgrade. Without performing these additional steps, the EMBD kit upgrade will operate in a less than optimal state, resulting in a reduced automated biological point detection and identification state.

The inventory objective for shipboard installations is one-hundred eighteen (118), up from one-hundred seventeen (117), due to adding LHA-8 to the installation plan. Third quarter FY22 installation schedule adjusted from three to one to account for late delivery of EMBD kits from JPEO-CBD.

A total of four completed with an additional two in progress of one-hundred eighteen (118) planned installations.

$230K FY24 funds from DRSKO Stowage was realigned to EMBD Upgrade due to cancelled DRSKO Stowage alteration. $150K FY23 and $90K FY24 funds from AVCAD was realigned to EMBD Upgrade due to Joint delays with AVCAD.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 5 / CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT												
B Kits												
Recurring												
1.1.1) CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT - NonOrganic (5)	- / -	12 / 0.000	26 / 0.000	25 / 0.000	- / -	25 / 0.000	20 / 0.000	19 / 0.000	16 / 0.000	- / -	- / -	118 / 0.000
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Subtotal: CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT	*- / -*	*12 / 0.000*	*26 / 0.000*	*25 / 0.000*	*- / -*	*25 / 0.000*	*20 / 0.000*	*19 / 0.000*	*16 / 0.000*	*- / -*	*- / -*	*118 / 0.000*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Installation												
Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT	- / 1.202	- / 1.553	- / 2.818	- / 2.838	- / 0.000	- / 2.838	- / 2.316	- / 2.208	- / 1.566	- / 0.000	- / 0.000	- / 14.501
Subtotal: Installation	*- / 1.202*	*- / 1.553*	*- / 2.818*	*- / 2.838*	*- / -*	*- / 2.838*	*- / 2.316*	*- / 2.208*	*- / 1.566*	*- / -*	*- / 0.000*	*- / 14.501*
Total												
Total Cost (Procurement + Support + Installation)	**1.202**	**1.553**	**2.818**	**2.838**	**0.000**	**2.838**	**2.316**	**2.208**	**1.566**	**0.000**	**0.000**	**14.501**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	**P-1 Line Item Number / Title:** 0989 / Chemical Warfare Detectors	**Modification Number / Title:** 5 / CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT

Installation Information

Method of Implementation: [none specified]:: Installation Name: CW001 CHEMICAL WARFARE PROGRAM EMBD UPGRADE KIT

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 1.202	12 / 1.020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 2.222
FY 2023	- / -	0 / 0.533	26 / 2.354	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	26 / 2.887
FY 2024	- / -	- / -	0 / 0.464	25 / 2.315	0 / 0.000	25 / 2.315	- / -	- / -	- / -	- / -	0 / 0.000	25 / 2.779
FY 2025	- / -	- / -	- / -	0 / 0.523	0 / 0.000	0 / 0.523	20 / 1.902	- / -	- / -	- / -	0 / 0.000	20 / 2.425
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.414	19 / 1.830	- / -	- / -	0 / 0.000	19 / 2.244
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.378	16 / 1.566	- / -	0 / 0.000	16 / 1.944
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 1.202	12 / 1.553	26 / 2.818	25 / 2.838	0 / 0.000	25 / 2.838	20 / 2.316	19 / 2.208	16 / 1.566	- / -	0 / 0.000	118 / 14.501

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	1	11	6	6	7	7	5	6	7	7	5	5	5	5	4	5	5	5	4	4	4	4	-	-	-	-	-	118
Out	-	-	-	1	11	6	6	7	7	5	6	7	7	5	5	5	5	4	5	5	5	4	4	4	4	-	-	-	-	-	118

Footnotes:

(5) EMBD plan - The procurement costs are specifically referring to Installation and Design Service Allocation (DSA) costs as there are no equipment procurement costs with any detector system installed. DSA costs are for government engineering oversight/support in preparation for ship installation and ship class planning yards for engineering services which include ship check, development and approval of ship installation drawings (SIDs), Ship Selected Record changes, Bill of Material (BOM), onsite planning yard engineering support during installation to answer liaison action record (LARs), and other engineering services depending on the planning yard. DSA costs are generally funded up to one year prior to planned installation due to drawing development lead time and installation preparation efforts. These costs are ship specific since drawings are developed for each ship, not class of ship. $240K FY23 funds realigned from cancelled DRSKO Stowage alteration to support EMBD Upgrades. $150K FY23 funds realigned from AVCAD due to Joint program delays to support EMBD Upgrades. - FY23 installations includes twenty-six (26) ships at $90.5K each. Includes sixteen (16) DDG-51 class ships, one DDG-1000 class ship, three LCS-1 class ships, three LCS-2 class ships, one LHA-6 class ship, and two LPD-17 class ships plus $463.9K in DSAs. - FY24 installations includes twenty-five (25) ships at $92K each. Includes sixteen (16) DDG-51 class ships, two LCS-1 class ships, two LCS-2 class ships, one LHA-6 class ship, one LHD class ship, and three LPD-17 class ships plus $485K in DSAs.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	**P-1 Line Item Number / Title:** 1000 / Ship Maintenance, Repair and Modernization

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,215.721	1,307.651	1,642.532	2,746.313	0.000	2,746.313	2,253.081	1,931.118	1,782.002	2,285.855	-	16,164.273
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2,215.721	1,307.651	1,642.532	2,746.313	0.000	2,746.313	2,253.081	1,931.118	1,782.002	2,285.855	-	16,164.273
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2,215.721**	**1,307.651**	**1,642.532**	**2,746.313**	**0.000**	**2,746.313**	**2,253.081**	**1,931.118**	**1,782.002**	**2,285.855**	**-**	**16,164.273**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Division A of the Consolidated Appropriations Act, 2020, Public Law 116-93 appropriated funding in Other Procurement, Navy (OPN) to initiate a pilot program funding private contracted ship maintenance in the U.S. Pacific Fleet (CPF) in FY 2020. Division C of the Consolidated Appropriations Act, 2021 continued that pilot in the U.S. Pacific Fleet, and Division C of the Consolidated Appropriations Act, 2022 expanded the pilot to include both U.S. Pacific Fleet and U.S. Fleet Forces (FFC).

In FY 2024, the program continues to include both CPF and FFC, with 41 private contracted ship maintenance availabilities funded with $2.75B OPN.

Funding private contracted ship maintenance planned for CPF and FFC with OPN allows the Navy to implement commercial best practices for ship maintenance. It provides more flexibility to extend contract lead times, enables the Navy to address emergent repair requirements, and strengthens industry partnerships. The Navy remains committed and motivated to utilizing this program to improve both the execution of depot-level maintenance and the overall readiness posture of the U.S. Navy's maritime forces.

AVAILABILITIES DEFINITIONS:
CIA (Carrier Incremental Availability): An availability for continuous accomplishment of depot maintenance and selected modernization on CVN 68 class aircraft carriers.

DMP (Depot Modernization Period): An availability scheduled primarily for the installation of major high priority warfare improvement alterations.

DPIA (Docking Planned Incremental Availability): A labor-intensive availability, of less than one year duration, for aircraft carriers in an Incremental Maintenance Plan. Maintenance and modernization are accomplished. Aircraft carriers assigned to Incremental Maintenance Plans are maintained through CIA's, PIAs and DPIAs in lieu of overhauls.

DPMA (Docking Phased Maintenance Availability): A PMA expanded to include maintenance and modernization that require dry-docking.

DSRA(Docking Selected Restricted Availabilities): An SRA expanded to include maintenance and modernization that require dry-docking.

EDPMA (Extended Docking Phased Maintenance Availability): A DPMA expanded to include maintenance and modernization that cannot be accomplished in a DPMA.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	**P-1 Line Item Number / Title:** 1000 / Ship Maintenance, Repair and Modernization	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

EDSRA (Extended Docking Selected Restricted Availability): A DSRA expanded to include maintenance and modernization that cannot be accomplished in a DSRA.

ERP (Extended Refit Period): Selected Restricted Availability with short docking inspection period

EOH (Engineered Overhaul): Overhaul availabilities of nuclear powered submarines during which the reactor is not refueled.

ERO (Engineered Refueling Overhaul): Overhaul major maintenance availabilities of different nuclear powered submarine classes during which the reactor is also refueled.

MMP (Major Maintenance Period): An onsite non-CNO availability for SSGNs for the accomplishment of maintenance and modernization.

OH (Overhaul): A major availability normally exceeding 6-months duration for the accomplishment of maintenance and modernization.

PIA (Planned Incremental Availability): A labor-intensive availability, of less than 6 months duration, for aircraft carriers in an Incremental Maintenance Plan. Maintenance and modernization are accomplished. Aircraft carriers assigned to Incremental Maintenance Plans are maintained through CIA's, PIAs and DPIAs in lieu of overhauls.

PIRA (Pre-Inactivation Restricted Availability): A hull specific availability assigned to establish a final, abbreviated OPCYCLE prior to inactivation.

P-MA (Phased Maintenance Availability): A short labor- intensive availability for ships in a Phased Maintenance Program for the accomplishment of maintenance and modernization. Ships assigned to Phased Maintenance Programs are maintained through PMAs in lieu of overhauls.

RA/TA (Restricted/Technical Availability): RA/TA is used to provide depot level support and maintenance (ie. Combat Systems, Habitability, Calibration, Ship Engineering material assessment, Nuclear Regional Maintenance Facilities)

SCO (Service Craft Overhaul): A major industrial availability for the accomplishment of maintenance and modernization on service craft.

SRA (Selected Restricted Availability): A short labor- intensive industrial period assigned to ships in Progressive or Engineered Operating Cycle Maintenance Programs for the accomplishment of maintenance and selected modernization. Ships assigned to Progressive Maintenance Programs are maintained through SRAs in lieu of overhauls.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	**P-1 Line Item Number / Title:** 1000 / Ship Maintenance, Repair and Modernization

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-5	1 / Ship Maintenance, Repair and Modernization				- / 2,215.721	- / 1,307.651	- / 1,642.532	- / 2,746.313	- / 0.000	- / 2,746.313
P-40	**Total Gross/Weapon System Cost**				**- / 2,215.721**	**- / 1,307.651**	**- / 1,642.532**	**- / 2,746.313**	**- / 0.000**	**- / 2,746.313**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2024 requests $2.75 Billion for U.S. Pacific Fleet and U.S. Fleet Forces to continue private contracted ship maintenance. Funding for ship maintenance Overhauls (OH) to Restricted/Technical Availabilities (RA/TA) performed at private shipyards. Ship overhauls restore the ship, including all operating systems that affect safety or combat capability, to established performance standards.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	**P-1 Line Item Number / Title:** 1000 / Ship Maintenance, Repair and Modernization	**Item Number / Title [DODIC]:** 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,215.721	1,307.651	1,642.532	2,746.313	0.000	2,746.313
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2,215.721	1,307.651	1,642.532	2,746.313	0.000	2,746.313
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2,215.721**	**1,307.651**	**1,642.532**	**2,746.313**	**0.000**	**2,746.313**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Flyaway - Ship Availability - U.S. Pacific Fleet Cost																		
Recurring Cost																		
1.1.1) USS ABRAHAM LINCOLN (CVN-0072) (PIA2) (1)	-	-	62.194	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) USS ANCHORAGE (LPD-0023) (DSRA1)	-	-	-	-	-	-	-	-	103.165	-	-	-	-	-	-	-	-	-
1.1.3) USS BARRY (DDG-0052) (DSRA4)	-	-	-	-	-	-	-	-	86.605	-	-	-	-	-	-	-	-	-
1.1.4) USS BOXER (LHD-0004) (DPMA3)	-	-	176.269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.5) USS O'KANE (DDG-0077) (SRA3-1)	-	-	-	-	-	25.126	-	-	-	-	-	-	-	-	-	-	-	-
1.1.6) USS CARL VINSON (CVN-70) (PIA3)	-	-	-	-	-	58.062	-	-	-	-	-	-	-	-	-	-	-	-
1.1.7) USS CHAFEE (DDG-0090) (DMP)	-	-	-	-	-	2.112	-	-	73.073	-	-	-	-	-	-	-	-	-
1.1.8) USS CHUNG-HOON (DDG-0093) (SRA2-2)	-	-	31.076	-	-	-	-	-	-	-	-	72.190	-	-	-	-	-	72.190
1.1.9) USS CINCINNATI (LCS-0020) (DSRA1)	-	-	-	-	-	-	-	-	0.627	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	P-1 Line Item Number / Title: 1000 / Ship Maintenance, Repair and Modernization	Item Number / Title [DODIC]: 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.1.10) USS COMSTOCK (LSD-0045) (DSRA3)	-	-	124.100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.11) USS CURTIS WILBUR (DDG-0054) (DSRA3)	-	-	72.032	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.12) USS ESSEX (LHD-0002) (DPMA3)	-	-	-	-	-	143.312	-	-	-	-	-	-	-	-	-	-	-	-
1.1.13) USS GABRIELLE GIFFORDS (LCS-0010) (DSRA1)	-	-	56.892	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.14) USS GERMANTOWN (LSD-0042) (SRA4-1)	-	-	5.684	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.15) USS GRIDLEY (DDG-0101) (SRA2-1)	-	-	20.013	-	-	3.964	-	-	47.321	-	-	-	-	-	-	-	-	-
1.1.16) USS HALSEY (DDG-0097) (SRA2-2)	-	-	23.246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.17) USS HARPERS FERRY (LSD-0049) (DSRA3)	-	-	104.485	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.18) USS JACKSON (LCS-0006) (DSRA1)	-	-	28.600	-	-	1.513	-	-	-	-	-	-	-	-	-	-	-	-
1.1.19) USS JOHN FINN (DDG-0113) (SRA1-1)	-	-	12.928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.20) USS JOHN PAUL JONES (DDG-0053) (DSRA3)	-	-	-	-	-	140.399	-	-	9.229	-	-	-	-	-	-	-	-	-
1.1.21) USS JOHN P MURTHA (LPD-0026) (SRA1-1)	-	-	22.791	-	-	-	-	-	4.183	-	-	-	-	-	-	-	-	-
1.1.22) USS JOHN S MCCAIN (DDG-0056) (SRA4-1)	-	-	24.713	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.23) USS KANSAS CITY (LCS-0022) (DSRA1)	-	-	-	-	-	-	-	-	0.076	-	-	-	-	-	-	-	-	-
1.1.24) USS KIDD (DDG-0100) (SRA2-1)	-	-	22.176	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	P-1 Line Item Number / Title: 1000 / Ship Maintenance, Repair and Modernization	Item Number / Title [DODIC]: 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.1.25) USS LAKE ERIE (CG-0070) (SRA3-1)	-	-	27.273	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.26) USS MAKIN ISLAND (LHD-0008) (PMA2-1)	-	-	38.556	-	-	-	-	-	82.641	-	-	-	-	-	-	-	-	-
1.1.27) USS MANCHESTER (LCS-0014) (DSRA1)	-	-	52.455	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.28) USS MCCAMPBELL (DDG-0085) (DMP)	-	-	110.740	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.29) USS MICHAEL MURPHY (DDG-0112) (DSRA1)	-	-	-	-	-	69.745	-	-	-	-	-	-	-	-	-	-	-	-
1.1.30) USS MOBILE BAY (CG-0053) (SRA3-3)	-	-	37.082	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.31) USS MONTGOMERY (LCS-0008) (DSRA1)	-	-	53.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.32) USS MUSTIN (DDG-0089) (DMP)	-	-	75.887	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.33) USS NIMITZ (CVN-0068) (CIA)	-	-	66.677	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.34) USS OMAHA (LCS-0012) (DSRA1)	-	-	52.696	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.35) USS PAUL HAMILTON (DDG-0060) (SRA3-1)	-	-	28.987	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.36) USS PINKNEY (DDG-0091) (DMP)	-	-	72.508	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.37) USS PREBLE (DDG-0088) (DMP)	-	-	86.462	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.38) USS PRINCETON (CG-0059) (SRA3-2)	-	-	32.926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.39) USS RUSSELL (DDG-0059) (SRA3-2)	-	-	47.468	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	P-1 Line Item Number / Title: 1000 / Ship Maintenance, Repair and Modernization	Item Number / Title [DODIC]: 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.1.40) USS SAN DIEGO (LPD-0022) (DSRA1)	-	-	119.221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.41) USS SOMERSET (LPD-0025) (SRA1-2)	-	-	46.872	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.42) USS SPRUANCE (DDG-0111) ES-SRA2-1	-	-	43.407	-	-	16.443	-	-	-	-	-	-	-	-	-	-	-	-
1.1.43) USS STERETT (DDG-0104) (SRA2-1)	-	-	19.207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.44) USS STOCKDALE (DDG-0106)	-	-	-	-	-	21.891	-	-	-	-	-	-	-	-	-	-	-	-
1.1.45) USS THEODORE ROOSEVELT (CVN-0071) (CIA)	-	-	18.043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.46) USS THEODORE ROOSEVELT (CVN-0071) (DPIA3)	-	-	153.142	-	-	0.500	-	-	-	-	-	-	-	-	-	-	-	-
1.1.47) USS TRIPOLI (LHA-0007) (STA1-1)	-	-	-	-	-	-	-	-	35.441	-	-	-	-	-	-	-	-	-
1.1.48) USS TULSA (LCS-0016)	-	-	-	-	-	49.549	-	-	-	-	-	-	-	-	-	-	-	-
1.1.49) USS WAYNE E MEYER (DDG-0108) (DSRA1)	-	-	100.508	-	-	-	-	-	1.049	-	-	-	-	-	-	-	-	-
1.1.50) USS ZUMWALT (DDG-1000) (ES-DSRA)	-	-	-	-	-	-	-	-	81.000	-	-	-	-	-	-	-	-	-
1.1.51) USS WILLIAM P LAWRENCE (DDG-0110) (DSRA1)	-	-	86.376	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.52) HABITABILITY (DDG-0051)	-	-	7.061	-	-	3.333	-	-	-	-	-	-	-	-	-	-	-	-
1.1.53) HABITABILITY (LSD-0041)	-	-	14.470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	P-1 Line Item Number / Title: 1000 / Ship Maintenance, Repair and Modernization	Item Number / Title [DODIC]: 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.1.54) Level of Effort Requirements (2)	-	-	36.998	-	-	0.016	-	-	-	-	-	-	-	-	-	-	-	-
1.1.55) USS FITZGERALD (SRA4-1)	-	-	-	-	-	1.549	-	-	22.863	-	-	-	-	-	-	-	-	-
1.1.56) USS SAMPSON (SRA2-1)	-	-	-	-	-	1.971	-	-	44.099	-	-	-	-	-	-	-	-	-
1.1.57) USS CHARLESTON (DSRA1)	-	-	-	-	-	4.622	-	-	58.737	-	-	-	-	-	-	-	-	-
1.1.58) USS PORTLAND (SRA1-1)	-	-	-	-	-	7.029	-	-	34.347	-	-	-	-	-	-	-	-	-
1.1.60) USS DECATUR (SRA3-1)	-	-	-	-	-	-	-	-	-	-	-	32.082	-	-	-	-	-	32.082
1.1.61) USS STETHEM (SRA4-1)	-	-	-	-	-	-	-	-	-	-	-	24.507	-	-	-	-	-	24.507
1.1.62) USS MOMSEN (DMP)	-	-	-	-	-	-	-	-	-	-	-	77.363	-	-	-	-	-	77.363
1.1.63) USS OAKLAND (DRSA1)	-	-	-	-	-	-	-	-	-	-	-	62.968	-	-	-	-	-	62.968
1.1.64) USS GABRIELLE GIFFORDS (DSRA2)	-	-	-	-	-	-	-	-	-	-	-	61.497	-	-	-	-	-	61.497
1.1.66) USS PAUL HAMILTON (SRA-2)	-	-	-	-	-	-	-	-	-	-	-	25.013	-	-	-	-	-	25.013
1.1.69) USS GREEN BAY (DSRA2)	-	-	-	-	-	-	-	-	-	-	-	162.793	-	-	-	-	-	162.793
1.1.71) USS HALSEY (DMP)	-	-	-	-	-	-	-	-	-	-	-	82.738	-	-	-	-	-	82.738
1.1.72) USS RUSSELL (DSRA3)	-	-	-	-	-	-	-	-	-	-	-	54.317	-	-	-	-	-	54.317
1.1.73) USS JOHN S. MCCAIN (DSRA4)	-	-	-	-	-	-	-	-	-	-	-	90.015	-	-	-	-	-	90.015
1.1.74) USS THEODORE ROOSEVELT (ES/NW - PIA3)	-	-	-	-	-	-	-	-	-	-	-	87.877	-	-	-	-	-	87.877
1.1.75) USS HOPPER (ES - SRA(d))	-	-	-	-	-	-	-	-	-	-	-	37.318	-	-	-	-	-	37.318
1.1.76) USS MOBILE (ES - DSRA1)	-	-	-	-	-	-	-	-	-	-	-	67.149	-	-	-	-	-	67.149

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	**P-1 Line Item Number / Title:** 1000 / Ship Maintenance, Repair and Modernization	**Item Number / Title [DODIC]:** 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.1.77) USS MANCHESTER (ES - SRA)	-	-	-	-	-	-	-	-	-	-	-	34.456	-	-	-	-	-	34.456
1.1.78) USS BOXER (ES - SRA4-1)	-	-	-	-	-	-	-	-	-	-	-	155.262	-	-	-	-	-	155.262
1.1.80) USS KIDD (ES - DMP)	-	-	-	-	-	-	-	-	-	-	-	91.666	-	-	-	-	-	91.666
Subtotal: Recurring Cost	-	-	*2,215.721*	-	-	*551.136*	-	-	*684.456*	-	-	*1,219.211*	-	-	-	-	-	*1,219.211*
Subtotal: Flyaway - Ship Availability - U.S. Pacific Fleet Cost	**-**	**-**	***2,215.721***	**-**	**-**	***551.136***	**-**	**-**	***684.456***	**-**	**-**	***1,219.211***	**-**	**-**	**-**	**-**	**-**	***1,219.211***
Flyaway - Ship Availability - U.S. Fleet Forces Cost																		
Recurring Cost																		
2.1.1) USS ARLINGTON (LPD-0024) (DSRA1)	-	-	-	-	-	-	-	-	168.811	-	-	-	-	-	-	-	-	-
2.1.2) USS ARLINGTON (LPD-0024) (NW-DSRA)	-	-	-	-	-	-	-	-	-	-	-	6.835	-	-	-	-	-	6.835
2.1.3) USS BAINBRIDGE (DDG-0096) (DSRA2)	-	-	-	-	-	0.333	-	-	90.754	-	-	-	-	-	-	-	-	-
2.1.4) USS BATAAN (LHD-0005) (FO-DSRA3)	-	-	-	-	-	-	-	-	-	-	-	251.561	-	-	-	-	-	251.561
2.1.5) USS BOISE (SSN-0764) (EOH)	-	-	-	-	-	-	-	-	400.000	-	-	600.000	-	-	-	-	-	600.000
2.1.6) USS CARNEY (DDG-0064) (SRA3-1)	-	-	-	-	-	-	-	-	-	-	-	27.220	-	-	-	-	-	27.220
2.1.7) USS COLE (DDG-0051) (ISRA)	-	-	-	-	-	10.823	-	-	-	-	-	-	-	-	-	-	-	-
2.1.8) USS COLE (DDG-0051) (NW-ISRA)	-	-	-	-	-	1.759	-	-	-	-	-	-	-	-	-	-	-	-
2.1.9) USS COLE (DDG-0051) (ISRA)	-	-	-	-	-	-	-	-	6.890	-	-	11.945	-	-	-	-	-	11.945
2.1.10) USS DELBERT D BLACK (DDG-0119) (ISRA)	-	-	-	-	-	-	-	-	-	-	-	7.154	-	-	-	-	-	7.154

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	P-1 Line Item Number / Title: 1000 / Ship Maintenance, Repair and Modernization	Item Number / Title [DODIC]: 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
2.1.11) USS DONALD COOK (DDG-0075) (EDSRA)	-	-	-	-	-	79.513	-	-	-	-	-	-	-	-	-	-	-	-
2.1.12) USS DONALD COOK (DDG-0075) (NW-EDSRA)	-	-	-	-	-	38.190	-	-	-	-	-	-	-	-	-	-	-	-
2.1.13) USS DWIGHT D EISENHOWER (CVN-0075) (FO-CIA)	-	-	-	-	-	-	-	-	-	-	-	16.772	-	-	-	-	-	16.772
2.1.14) USS DWIGHT D EISENHOWER (CVN-0069) (FO-DPIA3)	-	-	-	-	-	-	-	-	-	-	-	72.111	-	-	-	-	-	72.111
2.1.15) USS DYNAMIC (AFDL-0006) (ROH)	-	-	-	-	-	18.659	-	-	-	-	-	-	-	-	-	-	-	-
2.1.16) USS DYNAMIC (AFDL-0001) (NW-SCO)	-	-	-	-	-	0.925	-	-	-	-	-	-	-	-	-	-	-	-
2.1.17) USS FARRAGUT (DDG-0051) (DMP)	-	-	-	-	-	-	-	-	-	-	-	34.515	-	-	-	-	-	34.515
2.1.18) USS FORREST SHERMAN (DDG-0051) (SRA2-2)	-	-	-	-	-	25.471	-	-	-	-	-	-	-	-	-	-	-	-
2.1.19) USS GEORGE H W BUSH (CVN-0073) (FO-PIA2)	-	-	-	-	-	-	-	-	-	-	-	59.272	-	-	-	-	-	59.272
2.1.20) USS GEORGE WASHINGTON (CVN-0073) (CIA-R)	-	-	-	-	-	2.415	-	-	-	-	-	-	-	-	-	-	-	-
2.1.21) USS GEORGE WASHINGTON (CVN-0073) (NW-CIA-R)	-	-	-	-	-	14.557	-	-	-	-	-	-	-	-	-	-	-	-
2.1.22) USS GERALD R FORD (CVN-0078) (FO-CIA)	-	-	-	-	-	-	-	-	-	-	-	15.407	-	-	-	-	-	15.407
2.1.23) USS GONZALEZ (DDG-0066) (ISRA)	-	-	-	-	-	-	-	-	29.146	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	P-1 Line Item Number / Title: 1000 / Ship Maintenance, Repair and Modernization	Item Number / Title [DODIC]: 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
2.1.24) USS GRAVELY (DDG-0051) (ISRA)	-	-	-	-	-	6.586	-	-	-	-	-	-	-	-	-	-	-	-
2.1.25) USS GRAVELY (DDG-0051) (NW-ISRA)	-	-	-	-	-	0.897	-	-	-	-	-	-	-	-	-	-	-	-
2.1.26) USS GRAVELY (DDG-0051) (ISRA)	-	-	-	-	-	-	-	-	-	-	-	9.467	-	-	-	-	-	9.467
2.1.27) USS HARRY S TRUMAN (CVN-0075) (FO-PIA3)	-	-	-	-	-	69.212	-	-	-	-	-	-	-	-	-	-	-	-
2.1.28) USS IWO JIMA (LHD-0007) (FO-DPMA2)	-	-	-	-	-	203.649	-	-	-	-	-	-	-	-	-	-	-	-
2.1.29) USS IWO JIMA (LHD-0001) (NW-DPMA)	-	-	-	-	-	22.280	-	-	-	-	-	-	-	-	-	-	-	-
2.1.30) USS JASON E WILLIAMS (DDG-0051) (DMP)	-	-	-	-	-	-	-	-	23.516	-	-	156.762	-	-	-	-	-	156.762
2.1.31) USS JASON DUNHAM (DDG-0109) (SRA2-1)	-	-	-	-	-	14.213	-	-	-	-	-	-	-	-	-	-	-	-
2.1.32) USS JASON DUNHAM (DDG-0051) (NW-SRA 2-1)	-	-	-	-	-	6.076	-	-	-	-	-	-	-	-	-	-	-	-
2.1.33) USS LASSEN (DDG-0082) (DMP)	-	-	-	-	-	7.000	-	-	85.016	-	-	-	-	-	-	-	-	-
2.1.34) USS MASON (DDG-0051) (ISRA1)	-	-	-	-	-	-	-	-	-	-	-	7.244	-	-	-	-	-	7.244
2.1.35) USS MCFAUL (DDG-0051) (ISRA1)	-	-	-	-	-	-	-	-	-	-	-	8.801	-	-	-	-	-	8.801
2.1.36) USS MESA VERDE	-	-	-	-	-	-	-	-	-	-	-	86.061	-	-	-	-	-	86.061
2.1.37) USS MINNEAPOLIS/ST PAUL (LCS-0001) (SRA1-1)	-	-	-	-	-	-	-	-	-	-	-	26.640	-	-	-	-	-	26.640
2.1.38) USS MITSCHER (DDG-0057) (DSRA3)	-	-	-	-	-	98.579	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	P-1 Line Item Number / Title: 1000 / Ship Maintenance, Repair and Modernization	Item Number / Title [DODIC]: 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
2.1.39) USS MITSCHER (DDG-0057) (NW-DSRA3)	-	-	-	-	-	10.895	-	-	-	-	-	-	-	-	-	-	-	-
2.1.40) USS NITZE (DDG-0094) (DMP)	-	-	-	-	-	-	-	-	116.543	-	-	-	-	-	-	-	-	-
2.1.41) USS RAMAGE (DDG-0051) (DSRA3)	-	-	-	-	-	-	-	-	-	-	-	99.118	-	-	-	-	-	99.118
2.1.42) USS SAN ANTONIO (LPD-0017) (SRA2-1)	-	-	-	-	-	63.297	-	-	-	-	-	-	-	-	-	-	-	-
2.1.43) USS SAN ANTONIO (LPD-0017) (NW-SRA-2-2)	-	-	-	-	-	14.668	-	-	-	-	-	-	-	-	-	-	-	-
2.1.44) USS THE SULLIVANS (DDG-0051) (ISRA)	-	-	-	-	-	6.417	-	-	-	-	-	-	-	-	-	-	-	-
2.1.45) USS THE SULLIVANS (DDG-0051) (ISRA)	-	-	-	-	-	6.432	-	-	-	-	-	-	-	-	-	-	-	-
2.1.46) USS THOMAS HUDNER (DDG-0116) (ISRA)	-	-	-	-	-	15.253	-	-	-	-	-	-	-	-	-	-	-	-
2.1.47) USS THOMAS HUDNER (DDG-0051) (ISRA)	-	-	-	-	-	0.268	-	-	-	-	-	-	-	-	-	-	-	-
2.1.48) USS THOMAS HUDNER (DDG-0051) (ISRA)	-	-	-	-	-	-	-	-	-	-	-	6.793	-	-	-	-	-	6.793
2.1.49) USS TRUXUN (DDG-0051) (ISRA)	-	-	-	-	-	-	-	-	8.799	-	-	-	-	-	-	-	-	-
2.1.50) USS TRUXTUN (DDG-0051) (ISRA)	-	-	-	-	-	-	-	-	-	-	-	8.990	-	-	-	-	-	8.990
2.1.51) HABITABILITY (CVN-0075)	-	-	-	-	-	3.185	-	-	-	-	-	7.137	-	-	-	-	-	7.137
2.1.52) HABITABILITY (DDG-0051)	-	-	-	-	-	6.045	-	-	16.053	-	-	3.904	-	-	-	-	-	3.904
2.1.53) HABITABILITY (LHD-0001)	-	-	-	-	-	6.174	-	-	7.533	-	-	1.913	-	-	-	-	-	1.913
2.1.54) HABITABILITY (LPD-0017)	-	-	-	-	-	2.744	-	-	5.015	-	-	1.480	-	-	-	-	-	1.480

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	**P-1 Line Item Number / Title:** 1000 / Ship Maintenance, Repair and Modernization	**Item Number / Title [DODIC]:** 1 / Ship Maintenance, Repair and Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Subtotal: Recurring Cost	-	-	-	-	-	*756.515*	-	-	*958.076*	-	-	*1,527.102*	-	-	-	-	-	*1,527.102*
Subtotal: Flyaway - Ship Availability - U.S. Fleet Forces Cost	**-**	**-**	**-**	**-**	**-**	***756.515***	**-**	**-**	***958.076***	**-**	**-**	***1,527.102***	**-**	**-**	**-**	**-**	**-**	***1,527.102***
Gross/Weapon System Cost	**-**	**-**	**2,215.721**	**-**	**-**	**1,307.651**	**-**	**-**	**1,642.532**	**-**	**-**	**2,746.313**	**-**	**-**	**0.000**	**-**	**-**	**2,746.313**

Footnotes:

(1) Ship Maintenance, Repair and Modernization contract strategy initiatives to properly fund availabilites are based on projected ship availability contract award dates.

(2) Funds represent growth work and level of effort requirements supporting private ship maintenance availabilities.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	**P-1 Line Item Number / Title:** 1010 / Reactor Power Units

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,806.867	3.270	4.690	2.016	0.000	2.016	0.000	0.000	0.000	0.000	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,806.867	3.270	4.690	2.016	0.000	2.016	0.000	0.000	0.000	0.000	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,806.867**	**3.270**	**4.690**	**2.016**	**0.000**	**2.016**	**0.000**	**0.000**	**0.000**	**0.000**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Other Procurement, Navy, Reactor Power Units budget provides for the procurement of reactor refueling cores including naval nuclear fuel work (and the completion of core assembly to support select SSN and CVN refueling). Reactor refueling cores are the assemblies of nuclear fuel and associated structural and reactivity control equipment required for the refueling of nuclear powered ships. The procurement of these units is accomplished by the Department of Energy (DOE) using the Economy Act of 1932, as amended and codified in 31 USC 1535. The DOE has developed production lines to fabricate these units at the sole remaining core manufacturer. Reactor refueling core procurements are required to support scheduled refueling of operational ships and are budgeted on a lead-time basis while preserving workload stability and efficiency.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	**P-1 Line Item Number / Title:** 1010 / Reactor Power Units

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Reactor Power Units				- / 1,806.867	- / 3.270	- / 4.690	- / 2.016	- / -	- / 2.016
P-40	**Total Gross/Weapon System Cost**				**- / 1,806.867**	**- / 3.270**	**- / 4.690**	**- / 2.016**	**- / 0.000**	**- / 2.016**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Funding in FY24 is included for the completion of one refueling core for use in a LOS ANGELES-Class refueling overhaul.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	**P-1 Line Item Number / Title:** 1010 / Reactor Power Units	**Aggregated Items Title:** Reactor Power Units

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) Reactor Power Units																				
1) Reactor Power Units	A		-	-	1,806.867	-	-	3.270	-	-	4.690	-	-	2.016	-	-	-	-	-	2.016
Subtotal: 1) Reactor Power Units			**-**	**-**	***1,806.867***	**-**	**-**	***3.270***	**-**	**-**	***4.690***	**-**	**-**	***2.016***	**-**	**-**	**-**	**-**	**-**	***2.016***
Total			**-**	**-**	**1,806.867**	**-**	**-**	**3.270**	**-**	**-**	**4.690**	**-**	**-**	**2.016**	**-**	**-**	**-**	**-**	**-**	**2.016**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	**P-1 Line Item Number / Title:** 1020 / Reactor Components

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3,861.784	438.729	408.989	390.148	0.000	390.148	445.974	436.615	432.594	758.469	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3,861.784	438.729	408.989	390.148	0.000	390.148	445.974	436.615	432.594	758.469	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3,861.784**	**438.729**	**408.989**	**390.148**	**0.000**	**390.148**	**445.974**	**436.615**	**432.594**	**758.469**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Program funds long lead time nuclear reactor propulsion plant components for planned and emergent installation and reactor plant spares for all operational submarines (SSBN, SSN, and SSGN), aircraft carriers (CVN), and moored training ships (MTS).

The details of this program are classified CONFIDENTIAL and are submitted to Congress annually in the classified budget justification books.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	**P-1 Line Item Number / Title:** 1020 / Reactor Components

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Reactor Components				- / 3,861.784	- / 438.729	- / 408.989	- / 390.148	- / -	- / 390.148
P-40	**Total Gross/Weapon System Cost**				**- / 3,861.784**	**- / 438.729**	**- / 408.989**	**- / 390.148**	**- / 0.000**	**- / 390.148**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
More specific details are classified CONFIDENTIAL and are submitted to Congress annually in the classified budget justification books.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10	**P-1 Line Item Number / Title:** 1020 / Reactor Components	**Aggregated Items Title:** Reactor Components

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) Reactor Components																				
1.1) Reactor Components	A		-	-	3,861.784	-	-	438.729	-	-	408.989	-	-	390.148	-	-	-	-	-	390.148
Subtotal: 1) Reactor Components			**-**	**-**	***3,861.784***	**-**	**-**	***438.729***	**-**	**-**	***408.989***	**-**	**-**	***390.148***	**-**	**-**	**-**	**-**	**-**	***390.148***
Total			**-**	**-**	**3,861.784**	**-**	**-**	**438.729**	**-**	**-**	**408.989**	**-**	**-**	**390.148**	**-**	**-**	**-**	**-**	**-**	**390.148**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering	**P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204561N, 0204454N, 0204423N, 0203424N, 0603713N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	68.006	10.772	11.773	18.086	0.000	18.086	17.499	17.877	14.716	13.043	-	171.772
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	68.006	10.772	11.773	18.086	0.000	18.086	17.499	17.877	14.716	13.043	-	171.772
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**68.006**	**10.772**	**11.773**	**18.086**	**0.000**	**18.086**	**17.499**	**17.877**	**14.716**	**13.043**	**-**	**171.772**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DIVING AND SALVAGE EQUIPMENT:
The equipment procured from this Diving and Salvage OPN line item provides critical diving and salvage equipment that enables planned/emergent waterborne submarine/ship repairs, salvage and battle damage repair operations, search and recovery to water depths up to 20,000 feet of seawater and Undersea Clandestine Insertion of Special Operations Forces (UCI-SOF) (service common equipment) to keep our Navy fleet operational and enable national priority missions. Program objectives are to: (1) provide increased safety for divers, (2) increase underwater ship maintenance capabilities, (3) provide reliable, rapid response salvage capability, and (4) reduce diving equipment maintenance costs by standardizing configuration of diving systems in the Fleet.

FY-24 investment in Diving capability continues to emphasize phased replacement of aging life support equipment including surface-supplied diving helmets (18), composite air storage flasks (95), surface supplied augmented SCUBA sets (1), an HP Air Compressor (1), an Air Purification Unit (1), and compact diver life support system air supplies (15). Navy dive computers (190), required by each diver to calculate decompression penalties, will also be procured. This equipment is essential to maintaining diving readiness throughout the Fleet. Additionally we will make investments in new technology equipment that offer capability gains such as chamber van upgrades (3) and transportable recompression chamber system chamber upgrade kits (6) and equipment which will significantly improve divers' visual acuity in dark, limited visibility operations. This improved visual acuity equipment includes augmented visual displays (5 Gen3 + 6 Gen3 Upgrade Kits) and 3D SONAR (2). When integrated together these systems will produce a virtual environment in which a diver can operate and be directed by topside supervisors to execute salvage, search and recovery and other missions. Lastly, we continue to invest in upgrades to the Navy Experimental Diving Unit, which houses national assets such as the Ocean Simulation Facility (OSF). The OSF is a 40+ year old system that permits advanced research and testing of diving technology, diving procedures, human performance, decompression and physiology essential to advancing diving capabilities.

FY-24 investment in Salvage and Underwater Ship Husbandry include upgrades to existing Clyde Winches (2), a smart tow system (1), a power generator (1), hydraulic power units (4 upgrades), a command conference center (1), a salvage equipment transport and landing craft (1), an air compressor (1), cutter systems (1 hydraulic / 2 Kerrie cable), fire-fighting kits (2), portable submersible pumps (4), diesel welders (3), lighting kit systems (2), a salvage roller bag (1), a magnetic patch kit upgrade (1), a pier/VOO fire-fighting system (1) and a towing kit (1) all used for ship salvage. In Underwater Ship Husbandry we continue investments in replacing 30 year old underwater chain hoists (4 25 ton / 2 50 ton) used for a variety of rigging applications. These hoists are required to replace propellers underwater on aircraft carriers and large deck amphibious ships. Also required for continuing Underwater Ship Husbandry operations, we will acquire cofferdam systems (2), a submarine support system (1) and a surface ship support system (1), propeller repair kits (2), storage and shipping containers (14), UWSH power tools (2), video/camera equipment (1) and an underwater rigging support system (1). Underwater Ship Husbandry investments continue to produce significant return on investment by eliminating the need for emergent dry-dockings, thereby returning ships to service faster and less expensive than traditional shipyard availabilities. In FY-21, similar investments eliminated the need for 63 dry-dockings.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering	**P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0204561N, 0204454N, 0204423N, 0203424N, 0603713N
Line Item MDAP/MAIS Code: N/A		

FY-24 investment in Naval Special Warfare Service-Common Equipment continues with acquisition of a haskel pump (1), dive computers (18) and a standard navy double-lock recompression chamber system (SNDLRCS) van (1).

[P40A / DIVING (N97)]: The DIVING EQUIPMENT to be procured in FY24 in the amount of $3.655M includes modernization of the Navy Experimental Diving Unit's Ocean Simulation Facility, surface supplied diving helmet upgrades, air storage flasks, SCUBA equipment, dive computers (wrist mounted for calculating decompression requirements), transportable recompression chamber system upgrades, and Diver Augmented Visual Display (DAVD) equipment. DAVD investment will provide Navy divers the ability to see and navigate in zero visibility water. More detailed descriptions are provided below:

[P40A / HY176 - HP AIR COMPRESSORS]: (FY24 = 1 @ $78,220) This item replaces high pressure air compressors in existing divers' life support systems (DLSS) which have reached the end of their service life. Required I/O is 300.

[P40A / HY177 - AIR PURIFICATION UNITS]: (FY24 = $1 @ $47,740) The Portable Air Purification Unit is used when charging diver's life support system (DLSS) breathing air flasks. The Portable Air Monitor Unit can monitor the diver's breathing air in accordance with the requirements of the U.S. Navy Dive Manual and can be inserted inline of the DLSS to monitor the purity of the diver's breathing air in accordance with the requirements of the U.S. Navy Dive Manual. . Required I/O is 50 units.

[P40A / HY179 - NAVY EXPERIMENTAL DIVING UNIT]: (FY24 = 1 @ $691,870) NEDU's mission is to support the Fleet diver through test and evaluation of diving equipment and procedures as well as hyperbaric systems for NAVSEA, Navy, and DoD activities. Funding is to procure equipment for test, facilities atmospheric control, life support, and physiological systems. These systems not only ensure the safety and lives of NEDU sailors performing experimental dives, but ultimately support the combat readiness and mission success of the Fleet sailors who use the equipment tested at NEDU. Funding is included to support the periodic upgrade of Ocean Simulation Facility (OSF) components. The OSF is the world's largest man-rated hyperbaric chamber affording space for 12 divers in 5 hyperbaric dry chambers, man-rated for dives to 2,250 feet of sea water (1000 psi) with a 50' x 15', 55,000-gallon wet-pot capacity, temperatures from 28 to 104 degrees Fahrenheit, an associated 1.3 million-cubic foot (37 km3) bottle field and uses a fully computerized data instrumentation and collection system. Unit prices vary depending on the specific equipment mix planned for upgrade in any single year.

[P40A / HY193 - SURFACE SUPPLIED DIVING HELMET]: Kirby Morgan KM-37 NS Underwater Breathing Apparatus. This is a diving helmet with a fiberglass shell and second stage regulator that works in conjunction with a surface supply control console assembly (CCA) and an umbilical. Required I/O is 250.

[P40A / HY199 - NAVY DIVE COMPUTER]: (FY24 = 190 @ $1,680 each) The Navy Dive Computer is a diver worn decompression computer which provides primarily Self Contained Underwater Breathing Apparatus (SCUBA) divers with real time calculation of decompression limits/obligations. I/O is 1400.

[P40A / HY210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY]: (FY24 = 15 @ $21,930 each) This is a portable Air Supply that has designated primary and secondary air cylinders with a simple, unregulated control panel. The air supply will provide 3000-5000 psi diver-breathing air to diving life support systems (DLSS)including but not limited to the Standard Navy Double-Lock Recompression Chamber (SNDL), Transportable Recompression Chamber System (TRCS), Flyaway Diving System (FADS) III, and Lightweight Diving Systems (LWDS). This is for use in surface supplied diving and hyperbaric treatment operations. Required Inventory Objective I/O is 25.

[P40A / HY213 - HP COMPOSITE FLASK REPLACEMENT]: (FY24 = 95 @ $5,330 each) The flasks used in the Chamber Air and Oxygen System (CAOS), Air Supply Rack Assembly (ASRA), Oxygen Regulating Console Assembly (OSCA), Helium-Oxygen Supply Rack Assemblies (HOSRA), Compact Air Supply Assembly (CASRA), and Compact Oxygen Supply Rack Assembly (COSRA) all require replacement after 15 years. NAVSEA 00C will provide the cylinders to fleet diving commands. Required Inventory Objective I/O is 2500.

[P40A / HY224 - SCUBA REGULATORS]: This is 1st and 2nd stage Self Contained Underwater Breathing Apparatus (SCUBA) regulator fitted with an additional octopus 2nd stage and a console with both a cylinder pressure gauge and diver's depth gauge included. I/O is 5,000.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering	**P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0204561N, 0204454N, 0204423N, 0203424N, 0603713N
Line Item MDAP/MAIS Code: N/A		

[P40A / HY226 - FLEX CHAMBER]: The flexible recompression chamber system is composed of a double-lock flexible chamber, control console, gas supply and interconnecting hoses. The flex chamber is designed as an extreme lightweight system used to treat diver's injuries, including Arterial Gas Embolism and Decompression Sickness. I/O is 36.

[P40A / HY233 - SURFACE SUPPLY AUGMENTED SCUBA SYSTEM]: (FY24 = 1 @ $115,228) The Surface Supply Augmented SCUBA System consists of the Interspiro DIVIATOR Dive Panel (DP) Surface Supply System and the Interspiro DIVIATOR Self Contained Underwater Breathing Apparatus (SCUBA) System. This is a lightweight, highly portable system which makes is ideal for rapid deployment to remote locations. The apparatus combines the capability of surface supplied diving with the portability of SCUBA. Required Inventory Objective I/O is 50.

[P40A / HY234 - DIVER AUGMENTED VISUAL DISPLAY (DAVD)]: The Diver Augmented Visual Display (DAVD) is a system that incorporates 3D sonar mapping, high speed - high frequency helmet mounted sonar, diver tracking, and a head's up display into an existing USN underwater breathing apparatus (UBA). The system allows a diver in low/no visibility waters to locate targets of interest, transit to the location and see their work environment in real-time. In addition, the system allows a top-side diving supervisor to monitor the divers work progress. Each system includes equipment for one diver. Required Inventory Objective I/O is 173

[P40A / HY249 - DIVER LAUNCH AND RECOVERY SYSTEM (LARS)]: A Frame launch and recovery system for divers that includes a diver's stage. I/O = 6

[P40A / HY251 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR]: The 3D sonar imaging system produces real time high-resolution 3D imagery that can be used to create a 3D model of a large undersea area. The system is also capable of producing real time sonar imagery that can be over-laid onto a previously produced 3D model and used for diver locating and navigation controlled by the DAVD topside control system. The CODA is capable of tracking the diver working on the bottom and has a range of over 300 meters. This system has been evaluated for electrical and acoustic safety and is approved for use with US Navy Divers. HY-251 and HY-254 - This equipment significantly improve divers visual acuity in dark, limited visibility operations. This improved visual acuity equipment includes sector scan SONAR (3), augmented visual displays (3), 3D SONAR (1) and associated computer based training hardware (1). When integrated together these systems will produce a virtual environment in which a diver can operate and be directed by topside supervisors to execute salvage, search and recovery and other missions. I/O = 50

[P40A / HY253 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 2 UPGRADE KIT]: This kit will upgrade a GEN 1 DAVD system to a GEN 2 DAVD. I/O = 15

[P40A / HY254 - DIVER AUGMENTED VISUAL DISPLAY COMPUTER BASED TRAINING SYS]: Computer based training system that will provide training to USN divers in the operation and maintenance of the DAVD system. HY-251 and HY-254: This equipment significantly improve divers' visual acuity in dark, limited visibility operations. This improved visual acuity equipment includes sector scan SONAR (3), augmented visual displays (3), 3D SONAR (1) and associated computer based training hardware (1). When integrated together these systems will produce a virtual environment in which a diver can operate and be directed by topside supervisors to execute salvage, search and recovery and other missions. I/O = 10

[P40A / HY271 - SURFACE SUPPLIED DIVING HELMET UPGRADE]: (FY24 = 18 @ $11,375 each) The Surface Supplied Diving Helmet Upgrade is a phase replacement for Kirby Morgan KM-37 Underwater Breathing Apparatus that have reached the end of their service life. This is a rugged diving helmet with a second stage regulator that works in conjunction with a surface supply control console assembly (CCA) and an umbilical. Required I/O is 400

[P40A / HY272 - MULTI-OCCUPANT FLEXIBLE RECOMPRESSION CHAMBER SYSTEM]: The Multi-Occupancy Flexible Recompression Chamber System is a collapsible, extreme lightweight double-lock chamber for expeditionary operations. It includes a recompression chamber for up to three occupants, control console, interconnecting hoses, and high pressure gas supplies for air and oxygen. It is used to treat diving related injuries, including Arterial Gas Embolism and Decompression Sickness in accordance with the U.S. Navy Dive Manual. I/O is 36.

[P40A / HY273 - CHAMBER VAN UPGRADE]: (FY24 = 3 @ $178,490 each) The Chamber Van Upgrade is a phase replacement for ISO Containers that house portable recompression chambers, which have reached the end of their service life due to deterioration from salt-water exposure. In order to ensure the correct level of environmental protection during all missions for the hyperbaric chamber and their occupants, the upgraded Vans with improved protective coatings has become a necessity and requirement. I/O is 30

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering	**P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0204561N, 0204454N, 0204423N, 0203424N, 0603713N
Line Item MDAP/MAIS Code: N/A		

[P40A / HY274 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3]: (FY24 = 5 @ 76,400 each) The GEN 3 DAVD system will be an upgraded version of the GEN 2 DAVD, it will allow for greater accuracy of diver tracking and head positioning and will augment the divers underwater vision with AR/VR capability using helmet mounted high resolution cameras. I/O = 20

[P40A / HY278 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN3 UPGRADE KIT]: (FY24 = 6 @ $20,400 each) This kit will modify a DAVD - GEN 2 system to improve it to a GEN3 system for US Navy Fleet divers.

[P40A / HY288 - TRANSPORTABLE RECOMPRESSION CHAMBER SYSTEM 500PSI SERVICE]: The Transportable Recompression Chamber System (TRCS) with 5000psi service and high capacity breathing air and oxygen racks. This configuration provides an effective two-man evacuation, transport, treatment, and transfer under pressure capability in order to benefit a diver suffering a pressure related ailment requiring urgent hyperbaric treatment. This is the lightest, most transportable hyperbaric system available to the U. S. Navy.

[P40A / HY289 - TRANSPORTABLE RECOMPRESSION CHAMBER SYSTEM CHAMBER UPGRADE KIT]: (FY24 = 6 @ $7,940 each) Transportable Recompression Chamber System Upgrade Kits for 5000psi service to increase the TRCS operational capability, reduce footprint and provide interface with other U.S. Navy Certified Dive Systems rated to 5000psi.

[P40A / HY290 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR WITH GPC UPGRADE]: (FY24 = 2 @ $138,193 each) The Diver Augmented Visual Display (DAVD) 3D sonar imaging system with global positioning system (GPS) upgrade. This sonar produces real time high-resolution 3D imagery that can be used to create a 3D model of a large undersea area and real time sonar imagery that can be used for diver navigation.

[P40A / NAVAL SPECIAL WAREFARE (NSW) SERVICE-COMMON EQUIPMENT (N95)]: NAVAL SPECIAL WARFARE (NSW) SERVICE COMMON EQUIPMENT to be procured in FY24 in the amount of $1.766M includes the recompression chamber, pumps and dive computers. More detailed descriptions are provided below:

[P40A / HY236 - SERVICE COMMON STANDARD DOUBLE LOCK RECOMPRESSION CHAMBER (NSW)]: (FY24 = 1 @ $1,696,000) The NSW Service Common Standard Navy Double Lock Recompression Chamber System (SNDLRCS) is a conventional chamber designed and built using standard commercial specifications and standards. The SNDLRCS provides for surface decompression, training, and for the full range of recompression treatment for two patients and two attendants. These chambers are containerized to allow for transport and installation at a destination for long term operations. The SNDLRCS will replace aging legacy recompression chambers that are difficult to maintain and will be retired due to fatigue and material flaws. Required I/O is 4

[P40A / HY280 - HP AIR COMPRESSORS AND HASKEL PUMPS (NSW)]: This item includes diving air compressors, haskel pumps for oxygen transfer and ancillary support equipment in support of Naval Special Warfare (NSW) Combat Diving. The equipment in this line supports existing Table of Allowance (TOA) requirements of centrally managed diving equipment

[P40A / HY281 - UNDERWATER BREATHING APPARATUS MK16 (NSW)]: The item includes manufacture and installation of the MK16 retrofit in support of Naval Special Warfare (NSW) Combat Diving. The equipment in this line supports the product improvement of existing MK16 UBAs through modification of existing components.

[P40A / HY291 - HP COMPRESSOR (NSW)]: This item replaces high pressure air compressors in existing divers' life support systems which have reached the end of their service life.

[P40A / HY293 - HASKEL PUMPS (NSW)]: (FY24 = 1 @ $40,000) This item replaces oxygen booster pumps in existing divers' life support systems which have reached the end of their service life.

[P40A / HY294 - NAVY DIVE COMPUTER (NSW)]: (FY24 = 18 @ $1,680 each) The NSW Navy Dive Computer (NDC) is a decompression computer that monitors a divers depth and dive time to determine a decompression profile in accordance with US Navy decompression algorithms. These are to be used by Naval Special Warfare (NSW) divers and shall only be the make and model listed on the US Navy Authorized for Navy Use (ANU) list.

[P40A / HY295 - MK16 UPGRADES/PIP (NSW)]: The item includes manufacture and installation of the MK16 retrofit in support of Naval Special Warfare (NSW) Combat Diving. The equipment in this line supports the product improvement of existing MK16 UBAs through modification of existing components.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering	**P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0204561N, 0204454N, 0204423N, 0203424N, 0603713N
Line Item MDAP/MAIS Code: N/A		

[P40A / HY296 - DIVER LIFE SUPPORT SYSTEM (DLSS) CHARGING VAN (NSW)]: Modified ISO 8 ft x 8 ft x 10 ft ISO containers equipped to store and ship portable compressors and ancillary equipment in support of NSW combat diving operations. Each van is complete with a humidity controlling device for prolonging equipment life during storage. The system includes all necessary rigging and handling equipment.

[P40A / HY297 - STANDARD DOUBLE LOCK RECOMPRESSION CHAMBER VAN UPGRADE (NSW)]: These MILVANS are modified ISO 8 ft x 8 ft x 20 ft ISO containers equipped to store and ship portable recompression chambers and ancillary equipment in support of Naval Special Warfare (NSW) combat diving operations. Each van is complete with a humidity controlling device for prolonging equipment life during storage.

[P40A / MOBILE DIVING SALVAGE UNIT (MDSU) OUTFITTING EQUIPMENT (N95)]: The DIVING EQUIPMENT to be procured in FY24 in the amount of $0.327M provides prioritized outfitting for Mobile Diving Salvage Unit (MDSU), Explosive Ordinance Disposal (EOD) Commands and Underwater Construction Team (UCT) Table of Allowance (TOA) requirements of centrally managed diving systems and equipment. This equipment includes diving, salvage and combat support equipment to meet Required Operational Capabilities / Projected Operational Environment (ROC/POE) and Navy Mission Essential Tasks (NMET) to include underwater visual augmentation systems, dive computers, sonar systems and Self Contained Underwater Breathing Apparatus (SCUBA) regulators. More detailed descriptions are provided below:

[P40A / HY258 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR - NECC]: The 3D sonar imaging system produces real-time, high resolution 3D imagery that can be used to create a 3D model of a large undersea area. This equipment is intended to work in conjunction with or separate from the Diver Augmented Visual Display (DAVD) systems deployed by Navy Expeditionary Combat Command divers.

[P40A / HY260 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 2 UPGRADE KIT - NECC]: This kit will modify a DAVD - GEN 1 system to improve it to a GEN 2 system for Navy Expeditionary Combat Command divers.

[P40A / HY262 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3 UPGRADE KIT - NECC]: (FY24 = 7 @ $20,400 each) This kit will modify a DAVD - GEN 2 system to improve it to a GEN 3 system for Navy Expeditionary Combat Command divers.

[P40A / HY263 - SELF CONTAINED UNDERWATER BREATHING APPARATUS REGULATORS - NECC]: (FY24 = 5 @ $1,110 each) These a self contained underwater breathing apparatus (SCUBA) regulators that are used to reduce air pressure in a SCUBA cylinder and deliver that air at a useable pressure to a Navy Expeditionary Combat Command (NECC) diver. The make and model of the SCUBA regulator shall be approved on the US Navy Authorized for Navy Use (ANU) list.

[P40A / HY264 - NAVY DIVE COMPUTER - NECC]: (FY24 = 24 @ $1,667 each) This is a diver decompression computer that monitors a divers depth and dive time to determine a decompression profile in accordance with US Navy decompression algorithms. These are to be used by Navy Expeditionary Combat Command (NECC) divers and shall only be the make and model listed on the US Navy Authorized for Navy Use (ANU) list.

[P40A / HY277 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3 NECC]: The Gen-3 DAVD system will be an upgraded version of the GEN-2 DAVD, it will allow for greater accuracy of diver tracking and head positioning and will augment the divers underwater vision with AR/VR capability using helmet mounted high resolution cameras. I/O = 20

[P40A / HY298 - DAVD 3D SONAR WITH GPS UPGRADE NECC]: (FY24 = 1 @ $138,193) The 3D sonar imaging system with global positioning system (GPS) upgrade. Sonar produces real time high-resolution 3D imagery that can be used to create a 3D model of a large undersea area. The system is also capable of producing real time sonar imagery that can be over-laid onto a previously produced 3D model and used for diver locating and navigation controlled by a topside control system. These are to be used by Navy Expeditionary Combat Command (NECC) divers.

[P40A / EXPLOSIVE ORDNANCE DISPOSAL (EOD) DIVING & SALVAGE EQUIPMENT (N95)]: The EOD DIVING AND SALVAGE EQUIPMENT to be procured in FY24 in the amount of $6.135M provides prioritized outfitting for Explosive Ordinance Disposal (EOD) Commands. The outfitting provides diving, salvage and combat support equipment to meet Navy Mission Essential Tasks (NMET) to include telemetry systems and transportable recompression chamber systems.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering	**P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0204561N, 0204454N, 0204423N, 0203424N, 0603713N
Line Item MDAP/MAIS Code: N/A		

[P40A / HY279 - DIVER TELEMTRY SYSTEM]: (FY24 = 48 @ $24,500 each) Diver HUD System (EOD) - The system provides the diver with a heads up display (HUD) which incorporates various data for the diver to include inputs such as status, telemetry, terrain mapping, navigation and tracking. The system is provided for use in existing EOD underwater breathing apparatus (UBA) or face masks. I/O = 200.

[P40A / HY300 - EOD TRANSPORTABLE RECOMPRESSION CHAMBER SYSTEM (TRCS)]: (FY24 = 3 @ $1,653,000 each) The Transportable Recompression Chamber System (TRCS) provides an effective two-man evacuation, transport, treatment, and transfer under pressure capability in order to benefit a diver suffering a pressure related ailment requiring urgent hyperbaric treatment. This is the lightest, most transportable hyperbaric system available to the U. S. Navy. These are to be used by Navy Expeditionary Combat Command (NECC) divers. I/O = 7

[P40A / HY301 - EOD STANDARD NAVY DOUBLE-LOCK RECOMPRESSION CHAMBER (SNDL)]: The Standard Navy Double Lock Recompression Chamber System (SNDLRCS) is a conventional chamber designed and built using standard commercial specifications and standards. The SNDLRCS provides for surface decompression, training, and for the full range of recompression treatment for two patients and two attendants. These chambers are containerized to allow for transport and installation at a destination for long term operations. The SNDLRCS will replace aging legacy recompression chambers that are difficult to maintain and will be retired due to fatigue and material flaws. These are to be used by Navy Expeditionary Combat Command (NECC) divers. I/O = 3

[P40A / SALVAGE (N97)]: The SALVAGE EQUIPMENT to be procured in FY24 in the amount of $6.183M includes salvage winch upgrades, tow systems, pumps, hydraulic equipment, compressors, and fire-fighting equipment. Also included are underwater ship husbandry equipment (cofferdam systems, submarine and surface ship support systems, propeller repair kits and hydraulic chain hoists) to permit divers to make underwater repairs to ships and submarines afloat. More detailed descriptions are provided below:

[P40A / HY116 - PORTABLE SUBMERSIBLE PUMPS]: (FY24 = 4 @ $141,000 each) The submersible salvage pump system is designed move large volumes of fluid at a high discharge pressure resulting is a high lift capacity. The submersible pumps vary in discharge size of 2" to over 24" to meet designated response requirements. Systems are modular packaged for rapid deployment and transportation. Pump assemblies are designed to be used through limited access openings or to be positioned in confined spaces. Submersible salvage pump systems consist of submersible hydraulic pumps (2" to 24"), hydraulic power units, hydraulic hoses, and all ancillary equipment. Required I/O is 94.

[P40A / HY131 - REMOTE OPERATED VEHICLES (ROV) HANDLING SYSTEM]: These systems are used to launch and recover remotely operated vehicles and to tend the deployed cable, compensate for ship motion, monitor cable tension, and store cable. Required I/O is 10 (5 operational and 5 spares).

[P40A / HY140 REMOTE OPERATED VEHICLES (ROV) CONTROL PACKAGE]: The Remote Operated Vehicles (ROV) Control Package is used to control the various functions of the SWISS, DEEP DRONE, ORION, and CURV-21 ROVs. required I/O is 6 (3 operational plus 3 spares).

[P40A / HY145 - COFFERDAM SYSTEM]: (FY24 = 2 @ $125,000 each) This system will contain a variety of cofferdams necessary to accomplish underwater repair tasks to hull plating, shafts, stern tubes and sea chests on several ship classes. The cofferdams are engineered structural habitats which provide a safe underwater dry environment for divers to work and require very little maintenance. Required I/O is 50.

[P40A / HY146 - PROPELLER SYSTEM REPAIR KIT]: (FY24 = 1 @ 258,000) These kits will contain the tools necessary to repair minor propulsion system components and/or propeller damage underwater, or to conduct propulsion system and/or propeller maintenance. By accomplishing these repairs and/or maintenance in-place, propeller removal and replacement, or other propulsion system component replacements, can be avoided thereby saving maintenance funds and returning ships to service faster. Required I/O is 20.

[P40A / HY156 - SALVAGE VANS]: These vans are modified ISO 8 ft x 8 ft x 20 ft shipping containers equipped to store and ship portable salvage equipment to a vessel of opportunity in times of National emergency and functions as a support van on station. Each van is complete with a humidity controlling device for prolonging equipment life during storage. The system includes all necessary rigging and handling equipment. Required I/O is 10.

[P40A / HY169 - UNDERWATER SHIP HUSBANDRY (UWSH) POWER TOOLS]: (FY24 = 2 @ $110,000 each) These tools will replace the hydraulic tool previously issued to Fleet divers with improved technology. This technology improvement will provide tools which are more environmentally compatible, offer greater power, lighter weight and reduced maintenance. I/O is 20.

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ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0204561N, 0204454N, 0204423N, 0203424N, 0603713N
Line Item MDAP/MAIS Code: N/A		

[P40A / HY186 - SMART TOW SYSTEMS]: (FY24 = 1 @ $169,000) These systems consists of load cells, accelerometers, fire and flooding alarms, telemetry links and ancillary equipment to provide ship handlers with information critical to safe conduct of open ocean tows. I/O is 9.

[P40A / HY190 - VIDEO/CAMERA EQUIPMENT]: (FY24 = 1 @ $87,000) Underwater video/camera equipment used by divers to perform detailed inspections and provide objective quality evidence (OQE) of ship hulls and appendages condition before, during and after repair. Equipment is used extensively throughout the Fleet. This equipment will replace aging systems currently in use throughout the Fleet. I/O is 30.

[P40A / HY195 - UNDERWATER RIGGING SUPPORT SYSTEM]: (FY24 = 1 @ $200,000) General and special purpose rigging equipment designed for use in underwater ship repair applications. These systems support operation across all ship and submarine classes. I/O is 20.

[P40A / HY196 - UNDERWATER SHIP HUSBANDRY (UWSH) SUBMARINE SUPPORT SYSTEM]: (FY24 = 1 @ $485,000) Special purpose underwater tools and equipment used by divers to perform routine and emergent repairs to all classes of submarines. I/O is 24.

[P40A / HY197 - UNDERWATER SHIP HUSBANDRY (UWSH) PIERSIDE SUPPORT VANS]: Portable milvans and shippable containers outfitted with general and special purpose tools to support various underwater ship husbandry operations. I/O is 12.

[P40A / HY198 - UNDERWATER SHIP HUSBANDRY (UWSH) SURFACE SHIP SUPPORT SYSTEMS]: (FY24 = 1 @ $135,000) Special purpose underwater tools used by divers to perform routine and emergent repairs to all Classes of surface ships. I/O is 32

[P40A / HY200 - DEEP DRONE UPGRADE]: Modernization of the Remote Operated Vehicle (ROV) DEEP DRONE to include power, telemetry, avionics, thrusters, camera systems, and tools.

[P40A / HY201 - JETTING PUMPS]: System is designed to provide a high velocity water stream to move mud, sand, or silt. The system consists of a medium pressured, high flow rate pump that supplies water to specially designed diver operated jetting nozzles via high pressure hoses. The system is used mainly for jetting, but also can be used for firefighting and limited dewatering. Required Inventory Objective I/O is 22.

[P40A / HY204 - 400 AMP WELDER-DIESEL]: (FY24 = 3 @ $29,833 each) System consists of a skid-mounted, portable, diesel powered welding generator, welding cables, a stinger and ground clamp, welding safety equipment, and a spare parts kit. The system is used for arc welding and oxygen-arc cutting. Required Inventory Objective I/O is 27.

[P40A / HY205 - LIGHTING KIT SYSTEM]: (FY24 = 2 @ $18,500 each) System consists of extended able masts, 500-watt halogen floodlights, drop lights, extension cords, spare bulbs, and other miscellaneous items to support general lighting for salvage and oil pollution operations. The Lighting Kit System can use any 100-volt, single phase power source found at the salvage or pollution site. Required Inventory Objective I/O is 27.

[P40A / HY206 - KERRIE CABLE UNDERWATER CUTTING SYSTEM]: (FY24 = 2 @ $21,500 each) System is used for underwater cutting. The kit contains a flexible thermic lance, oxygen hoses, an oxygen regulator, various fittings, and a 400-amp safety switch enclosed in a watertight box. Required Inventory Objective I/O is 24.

[P40A / HY215 - LIGHTWEIGHT MOORING SYSTEM]: This is a lightweight and highly portable system for establishing a mooring in shallow to deep water. The system shall include a mooring leg consisting of anchors, chain, synthetic line and associated jewelry and fittings. Total I/O is 8.

[P40A / HY219 - PORTABLE SALVAGE CRANE]: A portable crane system for use on a vessel of opportunity to provide a lifting force during salvage operations. I/O is 8.

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Line Item MDAP/MAIS Code: N/A		

[P40A / HY221 - ADVANCED POWER GENERATOR]: (FY24 = 1 @ $281,000) This system generates electrical power using solar and wind energy and stores it in super-efficient. Lithium Ion Batteries. The system is capable of supplying electrical power to operate a Command Van, Salvage Shop Van and a Salvage Battle Damage Repair (BDR) Rigging Van for up to 5 days with no traditional petroleum fueled electrical power generator support. I/O is 8.

[P40A / HY227 - COMPLEX AND/OR LARGE UWSH REPAIR COFFERDAM SUPPORT SYSTEMS]: Special purpose underwater tools, equipment, cofferdams and habitat with a higher complexity and or size used by divers to perform routine and emergent repairs on all classes of surface ship and submarines. I/O is 15.

[P40A / HY228 - CLYDE WINCH UPGRADE MODIFICATIONS]: (FY24 = 2 @ $115,000 each) Portable Clyde deck winch consists of a dual drum assembly and a horizontal capstan mounted on the side of the deck winch. The deck winch is hydraulically driven by a self contained diesel engine and each drum/ capstan can pull up to 8 tons. The drive mechanism and braking system is upgraded to a hydraulic control and operation. Required I/O is 20.

[P40A / HY230 - NEXGEN HYDRAULIC POWER UNIT, MOD 6B]: This Hydraulic Power Unit is designed to provide the hydraulic fluids to operate US Navy Salvage equipment including the Beach Gear system. The hydraulic power unit is silenced for significant personnel safety and meets the latest environmental standards for clean air. Required I/O is 60.

[P40A / HY232 - DECK SYSTEMS HYDRAULIC POWER UNIT UPGRADE]: (FY24 = 4 @ $28,000 each) Deck Systems Hydraulic Power Unit (HPU) Upgrade: The Hydraulic Power Units the provide hydraulic fluid to operate the Portable Capstan are at the end of their service life and are no longer supported by the manufacturer. New HPU is more reliable, simpler to maintain, and is sound silenced for enhanced personnel safety. Required I/O is 22.

[P40A / HY237 - COMMAND CONFERENCE CENTER]: (FY24 = 1 @ $108,000) Provides a large expandable office area that is attached to the Salvage Command Van or can operate independently. Space will be environmentally controlled, able to be quickly unpacked with hard sides, and when repacked the shipping foot print will be a 20 ft connex box. Required I/O is 8.

[P40A / HY238 - SALVAGE EQUIPMENT TRANSPORT AND LANDING CRAFT]: (FY24 = 1 @ $290,000) A cargo vessel designed to operate with a two person crew, cargo capacity of at least 5000 lbs, articulating crane to pick up and load cargo from the pier, A-frame to load or unload cargo, bow ramp to drive on or off, and is capable of road transportation or airlift. Cruise speed is 25 knots at full load, a pusher bow attachment, and a tow bar. Required I/O is 8.

[P40A / HY241 - DEEP OCEAN SALVAGE SYSTEM]: Heave compensated lift system with power unit and ancillary equipment for executing deep water recovery operations. Required I/O is 2.

[P40A / HY247 - HYDRAULLIC CHAIN HOIST (25 TON)]: (FY24 = 4 @ $109,000 each) This system provides a means to lift loads utilizing rigging points under water. These Hydraulic Chain Hoists are specially designed for underwater use and are sized to safely lift 25 tons. Required I/O is 10.

[P40A / HY248 - HYDRAULIC CHAIN HOIST (50 TON)]: (FY24 = 2 @ $136,000 each) This system provides a means to lift loads utilizing rigging points under water. These Hydraulic Chain Hoists are specially designed for underwater use and are sized to safely lift 50 tons. Required I/O is 15.

[P40A / HY265 - POWER GENERATOR 200 KW]: Large diesel driven power generation set capable of providing power to operate SUPSALV Remote Operated Vehicle (ROV) systems. Forward deployed at all Emergency Ship Salvage Material (ESSM) Facilities to ensure ROV Systems always have access to redundant source of power to support USN contingency operational requirements. I/O is 8

[P40A / HY266 - 600 CFM SALVAGE AIR COMPRESSOR (TIER 4)]: (FY24 = 1 @ $169,000) Air compressor, diesel driven, with volume capable of pressurizing ship compartments for dewatering and able to support other fleet salvage operations requiring large volumes of pressurized air. I/O is 8

[P40A / HY267 - DIAMOND WIRE SAW CUTTING SYSTEM]: Salvage cutting systems designed to cut small to medium ship hulls using a simple diamond impregnated wire. Used for Harbor clearance operations or any fleet operation which requires ship hull sections to be cut. I/O is 4

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[P40A / HY268 - SALVAGE HYDRAULIC CUTTER SYSTEM]: (FY24 = 1 @ $97,000) Hydraulically operated tools for cutting or moving metal hull pieces, piping, cabling, etc. during salvage operations, harbor clearance ops, or any fleet operations in which removing of interference items are needed. I/O is 8

[P40A / HY269 - SALVAGE FIRE FIGHTING KIT]: (FY24 = 2 @ $65,000 each) Fire-fighting Kit designed to be used with the Salvage Jetting Pump system and provides a Fire Fighting Monitor, auxiliary equipment for foam, and other equipment for salvage team to fire a shipboard fire from the pier or Vessel of Opportunity (VOO). I/O is 8

[P40A / HY270 - WHE 36LBS FORKLIFT]: Weight Handling Equipment (WHE) for Undersea Operation Systems (USO): WHE positioned at the storage facility specifically for the handling of the Remote Operational Vehicle (ROV) and Autonomous Underwater Vehicle (AUV) systems to accommodate maintenance, repair, modernization, upgrade, and mobilization. I/O is 2

[P40A / HY282 - SALVAGE ROLLER BAG]: (FY24 = 1 @ $239,000) Salvage roller systems designed to roll small to medium ship hulls using a simple diamond impregnated bags. Used for Sarbor clearance operations or any fleet operation which requollers ship hull sections to be rolled.

[P40A / HY283 - MAGNETIC PATCH KIT UPGRADES]: (FY24 = 1 @ $133,000) Patch Kit Upgrade adds the latest technology of patching materials for salvors to utilize in combating flooding casualties due to combat, grounding, or collision. Patching material encompass a wide variety of methodologies to ensure salvors have a complete selection of options to respond to a wide variety of scenarios.

[P40A / HY284 - PIER/VOO FIRE FIGHTING SYSTEMS]: (FY24 = 1 @ $356,000) Fire Fighting System is an independant complete system for set up on a Pier or Vessel of Opportunity (VOO) for applying large volumes of water onto a ship for shore facility to combat a major casualty involving fire. Systems include energy source, pumps hoses, monitors, and control consoles needed to fight a major casualty.

[P40A / HY285 - TOWING KIT]: (FY24 = 1 @ $359,499) Equipment basket to conduct emergent tows for Naval vessels. Kit would contain certified bridles and tow jewelry required for those tows to allow rapid deployment. I/O is 7.

[P40A / HY299 - UNDERWATER SHIP HUSBANDRY (UWSH) STORAGE & SHIPPING CONTAINERS]: (FY24 = 14 @ $31,000 each) Special purpose portable storage and shipping containers to support various complex underwater ship husbandry equipment and/or rigging operational kits. Each container provides controlled storage and a secure shipping footprint. I/O is 60

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Line Item MDAP/MAIS Code: N/A		

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Diving and Salvage Equipment	P-5a			- / 68.006	- / 10.772	- / 11.773	- / 18.086	- / -	- / 18.086
P-40	**Total Gross/Weapon System Cost**				**- / 68.006**	**- / 10.772**	**- / 11.773**	**- / 18.086**	**- / 0.000**	**- / 18.086**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The increased funding through the FYDP will be used to procure Divers' Safety Life Support Recompression Chambers to replace Flyaway Recompression Chambers at or nearing end of service life or to meet capacity shortfall for EOD and Naval Construction Force Underwater Construction Teams (UCTs). Ensures wholeness for expeditionary divers' recompression chambers during transition from legacy (FARC) systems at the end of their service life. Replaces chambers beyond end of service life, provides one chamber for EOD to meet capacity gap in C6F. Provides chambers to meet capacity gap for UCT. Ensures EOD and Seabee Divers can continue to meet Fleet operational support requirements for MCM, diving and salvage, and port damage repair.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment	Aggregated Items Title: Diving and Salvage Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) DIVING (N97)																				
1.1) HY176 - HP AIR COMPRESSORS(†)	A		42,470.59	17	0.722	75,180.00	1	0.075	-	-	-	78,220.00	1	0.078	-	-	-	78,220.00	1	0.078
1.2) HY177 - AIR PURIFICATION UNITS(†)	A		58,593.22	59	3.457	-	-	-	-	-	-	47,740.00	1	0.048	-	-	-	47,740.00	1	0.048
1.3) HY179 - NAVY EXPERIMENTAL DIVING UNIT(†)	A		841,416.67	12	10.097	665,000.00	1	0.665	678,300.00	1	0.678	691,870.00	1	0.692	-	-	-	691,870.00	1	0.692
1.4) HY193 - SURFACE SUPPLIED DIVING HELMET(†)	A		12,535.21	71	0.890	7,190.00	4	0.029	-	-	-	-	-	-	-	-	-	-	-	-
1.5) HY199 - NAVY DIVE COMPUTER(†)	A		1,624.48	964	1.566	1,624.00	227	0.369	1,644.44	90	0.148	1,680.00	190	0.319	-	-	-	1,680.00	190	0.319
1.6) HY210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY(†)	A		-	-	-	-	-	-	-	-	-	21,930.00	15	0.329	-	-	-	21,930.00	15	0.329
1.7) HY213 - HP COMPOSITE FLASK REPLACEMENT(†)	A		4,797.81	821	3.939	5,120.00	58	0.297	5,220.00	70	0.365	5,317.00	96	0.510	-	-	-	5,317.00	96	0.510
1.8) HY224 - SCUBA REGULATORS(†)	A		1,047.01	787	0.824	1,084.00	51	0.055	-	-	-	-	-	-	-	-	-	-	-	-
1.9) HY226 - FLEX CHAMBER(†)	A		544,250.00	4	2.177	558,800.00	2	1.118	-	-	-	-	-	-	-	-	-	-	-	-
1.10) HY233 - SURFACE SUPPLY AUGMENTED SCUBA SYSTEM(†)	A		108,333.33	9	0.975	110,740.00	2	0.221	112,960.00	1	0.113	115,228.00	1	0.115	-	-	-	115,228.00	1	0.115
1.11) HY234 - DIVER AUGMENTED VISUAL DISPLAY (DAVD)(†)	A		39,800.00	5	0.199	40,730.00	2	0.081	-	-	-	-	-	-	-	-	-	-	-	-
1.13) HY251 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR(†)	A		101,500.00	2	0.203	103,600.00	2	0.207	-	-	-	-	-	-	-	-	-	-	-	-
1.14) HY253 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 2 UPGRADE KIT(†)	A		-	-	-	20,380.00	2	0.041	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment	Aggregated Items Title: Diving and Salvage Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1.15) HY254 - DIVER AUGMENTED VISUAL DISPLAY COMPUTER BASED TRAINING SYS(†)	A		152,000.00	1	0.152	-	-	-	158,370.00	1	0.158	-	-	-	-	-	-	-	-	-
1.16) HY271 - SURFACE SUPPLIED DIVING HELMET UPGRADE(†)	A		-	-	-	10,800.00	10	0.108	11,000.00	11	0.121	11,375.00	18	0.205	-	-	-	11,375.00	18	0.205
1.18) HY273 - CHAMBER VAN UPGRADE(†)	A		-	-	-	-	-	-	-	-	-	178,490.00	3	0.535	-	-	-	178,490.00	3	0.535
1.19) HY274 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3(†)	A		-	-	-	-	-	-	74,900.00	10	0.749	76,400.00	5	0.382	-	-	-	76,400.00	5	0.382
1.20) HY278 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN3 UPGRADE KIT(†)	A		-	-	-	-	-	-	-	-	-	20,400.00	6	0.122	-	-	-	20,400.00	6	0.122
1.21) HY288 - TRANSPORTABLE RECOMPRESSION CHAMBER SYSTEM 500PSI SERVICE(†)	A		-	-	-	-	-	-	1,005K	1	1.005	-	-	-	-	-	-	-	-	-
1.22) HY289 - TRANSPORTABLE RECOMPRESSION CHAMBER SYSTEM CHAMBER UPGRADE KIT(†)	A		-	-	-	-	-	-	-	-	-	7,940.00	6	0.048	-	-	-	7,940.00	6	0.048
1.23) HY290 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR WITH GPC UPGRADE(†)	A		-	-	-	-	-	-	135,484.00	2	0.271	138,193.00	2	0.276	-	-	-	138,193.00	2	0.276
Subtotal: 1) DIVING (N97)			**-**	**-**	***25.201***	**-**	**-**	***3.266***	**-**	**-**	***3.608***	**-**	**-**	***3.659***	**-**	**-**	**-**	**-**	**-**	***3.659***
2) NAVAL SPECIAL WAREFARE (NSW) SERVICE-COMMON EQUIPMENT (N95)																				
2.1) HY236 - SERVICE COMMON STANDARD DOUBLE LOCK RECOMPRESSION CHAMBER (NSW)(†)	A		1,625K	1	1.625	-	-	-	-	-	-	1,698K	1	1.698	-	-	-	1,698K	1	1.698

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
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Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
2.2) HY280 - HP AIR COMPRESSORS AND HASKEL PUMPS (NSW)(†)	A		-	-	-	683,500.00	1	0.684	-	-	-	-	-	-	-	-	-	-	-	-
2.3) HY281 - UNDERWATER BREATHING APPARATUS MK16 (NSW)(†)	A		-	-	-	927,000.00	1	0.927	-	-	-	-	-	-	-	-	-	-	-	-
2.5) HY293 - HASKEL PUMPS (NSW)(†)	A		-	-	-	-	-	-	38,148.00	2	0.076	40,000.00	1	0.040	-	-	-	40,000.00	1	0.040
2.6) HY294 - NAVY DIVE COMPUTER (NSW)(†)	A		-	-	-	-	-	-	1,655.74	183	0.303	1,680.00	18	0.030	-	-	-	1,680.00	18	0.030
2.7) HY295 - MK16 UPGRADES/PIP (NSW)(†)	A		-	-	-	-	-	-	18,207.00	55	1.001	-	-	-	-	-	-	-	-	-
2.9) HY297 - STANDARD DOUBLE LOCK RECOMPRESSION CHAMBER VAN UPGRADE (NSW)(†)	A		-	-	-	-	-	-	364,140.00	1	0.364	-	-	-	-	-	-	-	-	-
Subtotal: 2) NAVAL SPECIAL WAREFARE (NSW) SERVICE-COMMON EQUIPMENT (N95)			**-**	**-**	***1.625***	**-**	**-**	***1.611***	**-**	**-**	***1.744***	**-**	**-**	***1.768***	**-**	**-**	**-**	**-**	**-**	***1.768***
3) MOBILE DIVING SALVAGE UNIT (MDSU) OUTFITTING EQUIPMENT (N95)																				
3.1) HY258 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR - NECC(†)	A		102,000.00	1	0.102	103,510.00	1	0.104	-	-	-	-	-	-	-	-	-	-	-	-
3.2) HY260 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 2 UPGRADE KIT - NECC(†)	A		-	-	-	20,380.00	6	0.122	-	-	-	-	-	-	-	-	-	-	-	-
3.3) HY262 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3 UPGRADE KIT - NECC(†)	A		-	-	-	-	-	-	-	-	-	20,400.00	7	0.143	-	-	-	20,400.00	7	0.143
3.4) HY263 - SELF CONTAINED UNDERWATER	A		1,000.00	8	0.008	1,084.00	2	0.002	1,101.00	5	0.006	1,110.00	5	0.006	-	-	-	1,110.00	5	0.006

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment	Aggregated Items Title: Diving and Salvage Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
BREATHING APPARATUS REGULATORS - NECC(†)																				
3.5) HY264 - NAVY DIVE COMPUTER - NECC(†)	A		-	-	-	1,625.00	44	0.072	1,600.00	20	0.032	1,666.67	24	0.040	-	-	-	1,666.67	24	0.040
3.6) HY277 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3 NECC(†)	A		-	-	-	-	-	-	74,900.00	2	0.150	-	-	-	-	-	-	-	-	-
3.7) HY298 - DAVD 3D SONAR WITH GPS UPGRADE NECC(†)	A		-	-	-	-	-	-	135,484.00	1	0.135	138,193.00	1	0.138	-	-	-	138,193.00	1	0.138
Subtotal: 3) MOBILE DIVING SALVAGE UNIT (MDSU) OUTFITTING EQUIPMENT (N95)			***-***	***-***	***0.110***	***-***	***-***	***0.300***	***-***	***-***	***0.323***	***-***	***-***	***0.327***	***-***	***-***	***-***	***-***	***-***	***0.327***
4) EXPLOSIVE ORDNANCE DISPOSAL (EOD) DIVING & SALVAGE EQUIPMENT (N95)																				
4.1) HY279 - DIVER TELEMTRY SYSTEM(†)	A		-	-	-	-	-	-	-	-	-	24,500.00	48	1.176	-	-	-	24,500.00	48	1.176
4.2) HY300 - EOD TRANSPORTABLE RECOMPRESSION CHAMBER SYSTEM (TRCS)(†)	A		-	-	-	-	-	-	-	-	-	1,655K	3	4.965	-	-	-	1,655K	3	4.965
Subtotal: 4) EXPLOSIVE ORDNANCE DISPOSAL (EOD) DIVING & SALVAGE EQUIPMENT (N95)			***-***	***-***	***0.000***	***-***	***-***	***-***	***-***	***-***	***-***	***-***	***-***	***6.141***	***-***	***-***	***-***	***-***	***-***	***6.141***
5) SALVAGE (N97)																				
5.1) HY116 - PORTABLE SUBMERSIBLE PUMPS(†)	A		144,600.00	20	2.892	-	-	-	-	-	-	141,000.00	4	0.564	-	-	-	141,000.00	4	0.564
5.2) HY131 - REMOTE OPERATED VEHICLES (ROV) HANDLING SYSTEM (1)(†)	A		1,084K	1	1.084	2,474K	1	2.474	-	-	-	-	-	-	-	-	-	-	-	-
5.3) HY140 REMOTE OPERATED VEHICLES	A		-	-	-	-	-	-	947,000.00	1	0.947	-	-	-	-	-	-	-	-	-

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Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
(ROV) CONTROL PACKAGE(†)																				
5.4) HY145 - COFFERDAM SYSTEM(†)	A		243,384.62	13	3.164	120,500.00	4	0.482	123,333.00	3	0.370	125,000.00	2	0.250	-	-	-	125,000.00	2	0.250
5.5) HY146 - PROPELLER SYSTEM REPAIR KIT(†)	A		282,000.00	8	2.256	236,500.00	2	0.473	255,000.00	1	0.255	258,000.00	1	0.258	-	-	-	258,000.00	1	0.258
5.6) HY156 - SALVAGE VANS(†)	A		173,888.89	9	1.565	-	-	-	200,000.00	1	0.200	-	-	-	-	-	-	-	-	-
5.7) HY169 - UNDERWATER SHIP HUSBANDRY (UWSH) POWER TOOLS(†)	A		126,875.00	8	1.015	-	-	-	-	-	-	110,000.00	2	0.220	-	-	-	110,000.00	2	0.220
5.8) HY186 - SMART TOW SYSTEMS(†)	A		139,833.33	6	0.839	-	-	-	165,495.00	1	0.165	169,000.00	1	0.169	-	-	-	169,000.00	1	0.169
5.9) HY190 - VIDEO/CAMERA EQUIPMENT(†)	A		108,875.00	8	0.871	-	-	-	-	-	-	87,000.00	1	0.087	-	-	-	87,000.00	1	0.087
5.10) HY195 - UNDERWATER RIGGING SUPPORT SYSTEM(†)	A		226,769.23	13	2.948	-	-	-	192,000.00	1	0.192	200,000.00	1	0.200	-	-	-	200,000.00	1	0.200
5.11) HY196 - UNDERWATER SHIP HUSBANDRY (UWSH) SUBMARINE SUPPORT SYSTEM(†)	A		557,000.00	14	7.798	460,000.00	1	0.460	473,000.00	1	0.473	485,000.00	1	0.485	-	-	-	485,000.00	1	0.485
5.12) HY197 - UNDERWATER SHIP HUSBANDRY (UWSH) PIERSIDE SUPPORT VANS(†)	A		280,833.33	6	1.685	205,000.00	1	0.205	215,000.00	1	0.215	-	-	-	-	-	-	-	-	-
5.13) HY198 - UNDERWATER SHIP HUSBANDRY (UWSH) SURFACE SHIP SUPPORT SYSTEMS(†)	A		150,892.86	28	4.225	146,500.00	2	0.293	-	-	-	135,000.00	1	0.135	-	-	-	135,000.00	1	0.135
5.15) HY201 - JETTING PUMPS(†)	A		210,411.76	17	3.577	-	-	-	230,000.00	1	0.230	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
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Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
5.16) HY204 - 400 AMP WELDER-DIESEL(†)	A		-	-	-	-	-	-	-	-	-	29,833.00	3	0.089	-	-	-	29,833.00	3	0.089
5.17) HY205 - LIGHTING KIT SYSTEM(†)	A		15,541.67	24	0.373	-	-	-	-	-	-	18,500.00	2	0.037	-	-	-	18,500.00	2	0.037
5.18) HY206 - KERRIE CABLE UNDERWATER CUTTING SYSTEM(†)	A		17,562.50	16	0.281	-	-	-	-	-	-	21,500.00	2	0.043	-	-	-	21,500.00	2	0.043
5.20) HY219 - PORTABLE SALVAGE CRANE	A		206,500.00	2	0.413	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.21) HY221 - ADVANCED POWER GENERATOR(†)	A		-	-	-	-	-	-	275,400.00	1	0.275	281,000.00	1	0.281	-	-	-	281,000.00	1	0.281
5.22) HY227 - COMPLEX AND/OR LARGE UWSH REPAIR COFFERDAM SUPPORT SYSTEMS(†)	A		738,000.00	3	2.214	729,000.00	1	0.729	748,000.00	1	0.748	-	-	-	-	-	-	-	-	-
5.23) HY228 - CLYDE WINCH UPGRADE MODIFICATIONS(†)	A		107,250.00	12	1.287	110,500.00	2	0.221	112,950.00	2	0.226	115,000.00	2	0.230	-	-	-	115,000.00	2	0.230
5.24) HY230 - NEXGEN HYDRAULIC POWER UNIT, MOD 6B(†)	A		100,666.67	3	0.302	-	-	-	105,300.00	2	0.211	-	-	-	-	-	-	-	-	-
5.25) HY232 - DECK SYSTEMS HYDRAULIC POWER UNIT UPGRADE(†)	A		25,333.33	3	0.076	-	-	-	28,000.00	2	0.056	28,000.00	4	0.112	-	-	-	28,000.00	4	0.112
5.26) HY237 - COMMAND CONFERENCE CENTER(†)	A		-	-	-	-	-	-	106,200.00	1	0.106	108,000.00	1	0.108	-	-	-	108,000.00	1	0.108
5.27) HY238 - SALVAGE EQUIPMENT TRANSPORT AND LANDING CRAFT(†)	A		-	-	-	-	-	-	284,400.00	1	0.284	290,000.00	1	0.290	-	-	-	290,000.00	1	0.290
5.28) HY241 - DEEP OCEAN SALVAGE SYSTEM	A		745,000.00	2	1.490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
5.29) HY247 - HYDRAULLIC CHAIN HOIST (25 TON)(†)	A		90,000.00	1	0.090	-	-	-	-	-	-	109,000.00	4	0.436	-	-	-	109,000.00	4	0.436
5.30) HY248 - HYDRAULIC CHAIN HOIST (50 TON)(†)	A		125,000.00	5	0.625	129,000.00	2	0.258	132,000.00	3	0.396	136,000.00	2	0.272	-	-	-	136,000.00	2	0.272
5.31) HY265 - POWER GENERATOR 200 KW(†)	A		-	-	-	-	-	-	207,000.00	1	0.207	-	-	-	-	-	-	-	-	-
5.32) HY266 - 600 CFM SALVAGE AIR COMPRESSOR (TIER 4)(†)	A		-	-	-	-	-	-	166,000.00	1	0.166	169,000.00	1	0.169	-	-	-	169,000.00	1	0.169
5.34) HY268 - SALVAGE HYDRAULIC CUTTER SYSTEM(†)	A		-	-	-	-	-	-	95,000.00	1	0.095	97,000.00	1	0.097	-	-	-	97,000.00	1	0.097
5.35) HY269 - SALVAGE FIRE FIGHTING KIT(†)	A		-	-	-	-	-	-	64,000.00	1	0.064	65,000.00	2	0.130	-	-	-	65,000.00	2	0.130
5.37) HY282 - SALVAGE ROLLER BAG(†)	A		-	-	-	-	-	-	-	-	-	239,000.00	1	0.239	-	-	-	239,000.00	1	0.239
5.38) HY283 - MAGNETIC PATCH KIT UPGRADES(†)	A		-	-	-	-	-	-	-	-	-	133,000.00	1	0.133	-	-	-	133,000.00	1	0.133
5.39) HY284 - PIER/ VOO FIRE FIGHTING SYSTEMS(†)	A		-	-	-	-	-	-	-	-	-	356,000.00	1	0.356	-	-	-	356,000.00	1	0.356
5.40) HY285 - TOWING KIT(†)	A		-	-	-	-	-	-	-	-	-	359,499.00	1	0.359	-	-	-	359,499.00	1	0.359
5.41) HY299 - UNDERWATER SHIP HUSBANDRY (UWSH) STORAGE & SHIPPING CONTAINERS(†)	A		-	-	-	-	-	-	31,000.00	7	0.217	31,571.00	14	0.442	-	-	-	31,571.00	14	0.442
Subtotal: 5) SALVAGE (N97)			**-**	**-**	***41.070***	**-**	**-**	***5.595***	**-**	**-**	***6.098***	**-**	**-**	***6.191***	**-**	**-**	**-**	**-**	**-**	***6.191***
Total			**-**	**-**	**68.006**	**-**	**-**	**10.772**	**-**	**-**	**11.773**	**-**	**-**	**18.086**	**-**	**-**	**-**	**-**	**-**	**18.086**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
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Footnotes:

(1) A deep ocean salvage mission specific ROV (Remotely Operated Vehicle) LARS (Launch and Recovery System). This modernized ROV handling system will accommodate capability increases in ROV max depth and vehicle horsepower. The LARS will have a smaller logistics footprint [as compared to obsolete legacy program systems] allowing the added option of commercial air shipment which improves global rapid response and cost effectiveness in support of a sustained high salvage OPTEMPO, especially in Westpac.

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Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) DIVING (N97)												
1.1) HY176 - HP AIR COMPRESSORS		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	1	75,180.00	Y		
1.1) HY176 - HP AIR COMPRESSORS		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	78,220.00	Y		
1.2) HY177 - AIR PURIFICATION UNITS		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	47,740.00	Y		
1.3) HY179 - NAVY EXPERIMENTAL DIVING UNIT		2022	Navy Experimental Diving Unit / Panama City, FL	Various	Panama City, FL	Oct 2021	Oct 2022	1	665,000.00	Y		
1.3) HY179 - NAVY EXPERIMENTAL DIVING UNIT		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	678,300.00	Y		
1.3) HY179 - NAVY EXPERIMENTAL DIVING UNIT		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	691,870.00	Y		
1.4) HY193 - SURFACE SUPPLIED DIVING HELMET		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	4	7,190.00	Y		
1.5) HY199 - NAVY DIVE COMPUTER		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	227	1,624.00	Y		
1.5) HY199 - NAVY DIVE COMPUTER		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	90	1,644.44	Y		
1.5) HY199 - NAVY DIVE COMPUTER		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	190	1,680.00	Y		
1.6) HY210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	15	21,930.00	Y		
1.7) HY213 - HP COMPOSITE FLASK REPLACEMENT		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	58	5,120.00	Y		
1.7) HY213 - HP COMPOSITE FLASK REPLACEMENT		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	70	5,220.00	Y		
1.7) HY213 - HP COMPOSITE FLASK REPLACEMENT		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	96	5,317.00	Y		
1.8) HY224 - SCUBA REGULATORS		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	51	1,084.00	Y		
1.9) HY226 - FLEX CHAMBER		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	2	558,800.00	Y		
1.10) HY233 - SURFACE SUPPLY AUGMENTED SCUBA SYSTEM		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	2	110,740.00	Y		
1.10) HY233 - SURFACE SUPPLY AUGMENTED SCUBA SYSTEM		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	112,960.00	Y		
1.10) HY233 - SURFACE SUPPLY AUGMENTED SCUBA SYSTEM		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	115,228.00	Y		

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Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.11) HY234 - DIVER AUGMENTED VISUAL DISPLAY (DAVD)		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	2	40,730.00	Y		
1.13) HY251 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	2	103,600.00	Y		
1.14) HY253 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 2 UPGRADE KIT		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	2	20,380.00	Y		
1.15) HY254 - DIVER AUGMENTED VISUAL DISPLAY COMPUTER BASED TRAINING SYS		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	158,370.00	Y		
1.16) HY271 - SURFACE SUPPLIED DIVING HELMET UPGRADE		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	10	10,800.00	Y		
1.16) HY271 - SURFACE SUPPLIED DIVING HELMET UPGRADE		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	11	11,000.00	Y		
1.16) HY271 - SURFACE SUPPLIED DIVING HELMET UPGRADE		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	18	11,375.00	Y		
1.18) HY273 - CHAMBER VAN UPGRADE		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	3	178,490.00	Y		
1.19) HY274 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	10	74,900.00	Y		
1.19) HY274 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	5	76,400.00	Y		
1.20) HY278 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN3 UPGRADE KIT		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	6	20,400.00	Y		
1.21) HY288 - TRANSPORTABLE RECOMPRESSION CHAMBER SYSTEM 500PSI SERVICE		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	1,005K	Y		
1.22) HY289 - TRANSPORTABLE RECOMPRESSION CHAMBER SYSTEM CHAMBER UPGRADE KIT		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	6	7,940.00	Y		

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment	Aggregated Items: Diving and Salvage Equipment

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.23) HY290 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR WITH GPC UPGRADE		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	2	135,484.00	Y		
1.23) HY290 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR WITH GPC UPGRADE		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	2	138,193.00	Y		
2) NAVAL SPECIAL WAREFARE (NSW) SERVICE-COMMON EQUIPMENT (N95)												
2.1) HY236 - SERVICE COMMON STANDARD DOUBLE LOCK RECOMPRESSION CHAMBER (NSW)		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	1,698K	Y		
2.2) HY280 - HP AIR COMPRESSORS AND HASKEL PUMPS (NSW)		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	1	683,500.00	Y		
2.3) HY281 - UNDERWATER BREATHING APPARATUS MK16 (NSW)		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	1	927,000.00	Y		
2.5) HY293 - HASKEL PUMPS (NSW)		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	2	38,148.00	Y		
2.5) HY293 - HASKEL PUMPS (NSW)		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	40,000.00	Y		
2.6) HY294 - NAVY DIVE COMPUTER (NSW)		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	183	1,655.74	Y		
2.6) HY294 - NAVY DIVE COMPUTER (NSW)		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	18	1,680.00	Y		
2.7) HY295 - MK16 UPGRADES/ PIP (NSW)		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	55	18,207.00	Y		
2.9) HY297 - STANDARD DOUBLE LOCK RECOMPRESSION CHAMBER VAN UPGRADE (NSW)		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	364,140.00	Y		
3) MOBILE DIVING SALVAGE UNIT (MDSU) OUTFITTING EQUIPMENT (N95)												
3.1) HY258 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) 3D SONAR - NECC		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	1	103,510.00	Y		
3.2) HY260 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 2 UPGRADE KIT - NECC		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	6	20,380.00	Y		
3.3) HY262 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3 UPGRADE KIT - NECC		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	7	20,400.00	Y		

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
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Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3.4) HY263 - SELF CONTAINED UNDERWATER BREATHING APPARATUS REGULATORS - NECC		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	2	1,084.00	Y		
3.4) HY263 - SELF CONTAINED UNDERWATER BREATHING APPARATUS REGULATORS - NECC		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	5	1,101.00	Y		
3.4) HY263 - SELF CONTAINED UNDERWATER BREATHING APPARATUS REGULATORS - NECC		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	5	1,110.00	Y		
3.5) HY264 - NAVY DIVE COMPUTER - NECC		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2022	Apr 2023	44	1,625.00	Y		
3.5) HY264 - NAVY DIVE COMPUTER - NECC		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	20	1,600.00	Y		
3.5) HY264 - NAVY DIVE COMPUTER - NECC		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	24	1,666.67	Y		
3.6) HY277 - DIVER AUGMENTED VISUAL DISPLAY (DAVD) GEN 3 NECC		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	2	74,900.00	Y		
3.7) HY298 - DAVD 3D SONAR WITH GPS UPGRADE NECC		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	135,484.00	Y		
3.7) HY298 - DAVD 3D SONAR WITH GPS UPGRADE NECC		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	138,193.00	Y		
4) EXPLOSIVE ORDNANCE DISPOSAL (EOD) DIVING & SALVAGE EQUIPMENT (N95)												
4.1) HY279 - DIVER TELEMTRY SYSTEM		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	48	24,500.00	Y		
4.2) HY300 - EOD TRANSPORTABLE RECOMPRESSION CHAMBER SYSTEM (TRCS)		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	3	1,655K	Y		
5) SALVAGE (N97)												
5.1) HY116 - PORTABLE SUBMERSIBLE PUMPS		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	4	141,000.00	Y		
5.2) HY131 - REMOTE OPERATED VEHICLES (ROV) HANDLING SYSTEM (1)		2022	TBD / TBD	TBD	** NO PCO **	Sep 2022	Sep 2023	1	2,474K	Y		
5.3) HY140 REMOTE OPERATED VEHICLES (ROV) CONTROL PACKAGE		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	947,000.00	Y		

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Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.4) HY145 - COFFERDAM SYSTEM		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Feb 2022	Feb 2023	4	120,500.00	Y		
5.4) HY145 - COFFERDAM SYSTEM		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	3	123,333.00	Y		
5.4) HY145 - COFFERDAM SYSTEM		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	2	125,000.00	Y		
5.5) HY146 - PROPELLER SYSTEM REPAIR KIT		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Feb 2022	Feb 2023	2	236,500.00	Y		
5.5) HY146 - PROPELLER SYSTEM REPAIR KIT		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	255,000.00	Y		
5.5) HY146 - PROPELLER SYSTEM REPAIR KIT		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	258,000.00	Y		
5.6) HY156 - SALVAGE VANS		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	200,000.00	Y		
5.7) HY169 - UNDERWATER SHIP HUSBANDRY (UWSH) POWER TOOLS		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	2	110,000.00	Y		
5.8) HY186 - SMART TOW SYSTEMS		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	165,495.00	Y		
5.8) HY186 - SMART TOW SYSTEMS		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	169,000.00	Y		
5.9) HY190 - VIDEO/CAMERA EQUIPMENT		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	87,000.00	Y		
5.10) HY195 - UNDERWATER RIGGING SUPPORT SYSTEM		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	192,000.00	Y		
5.10) HY195 - UNDERWATER RIGGING SUPPORT SYSTEM		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	200,000.00	Y		
5.11) HY196 - UNDERWATER SHIP HUSBANDRY (UWSH) SUBMARINE SUPPORT SYSTEM		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Feb 2022	Feb 2023	1	460,000.00	Y		
5.11) HY196 - UNDERWATER SHIP HUSBANDRY (UWSH) SUBMARINE SUPPORT SYSTEM		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	473,000.00	Y		
5.11) HY196 - UNDERWATER SHIP HUSBANDRY (UWSH) SUBMARINE SUPPORT SYSTEM		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	485,000.00	Y		
5.12) HY197 - UNDERWATER SHIP HUSBANDRY (UWSH) PIERSIDE SUPPORT VANS		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Feb 2022	Feb 2023	1	205,000.00	Y		
5.12) HY197 - UNDERWATER SHIP HUSBANDRY (UWSH) PIERSIDE SUPPORT VANS		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	215,000.00	Y		

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Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.13) HY198 - UNDERWATER SHIP HUSBANDRY (UWSH) SURFACE SHIP SUPPORT SYSTEMS		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Feb 2022	Feb 2023	2	146,500.00	Y		
5.13) HY198 - UNDERWATER SHIP HUSBANDRY (UWSH) SURFACE SHIP SUPPORT SYSTEMS		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	135,000.00	Y		
5.15) HY201 - JETTING PUMPS		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	230,000.00	Y		
5.16) HY204 - 400 AMP WELDER-DIESEL		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	3	29,833.00	Y		
5.17) HY205 - LIGHTING KIT SYSTEM		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	2	18,500.00	Y		
5.18) HY206 - KERRIE CABLE UNDERWATER CUTTING SYSTEM		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	2	21,500.00	Y		
5.21) HY221 - ADVANCED POWER GENERATOR		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	275,400.00	Y		
5.21) HY221 - ADVANCED POWER GENERATOR		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	281,000.00	Y		
5.22) HY227 - COMPLEX AND/ OR LARGE UWSH REPAIR COFFERDAM SUPPORT SYSTEMS		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Feb 2022	Feb 2023	1	729,000.00	Y		
5.22) HY227 - COMPLEX AND/ OR LARGE UWSH REPAIR COFFERDAM SUPPORT SYSTEMS		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	748,000.00	Y		
5.23) HY228 - CLYDE WINCH UPGRADE MODIFICATIONS		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Mar 2022	Mar 2023	2	110,500.00	Y		
5.23) HY228 - CLYDE WINCH UPGRADE MODIFICATIONS		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	2	112,950.00	Y		
5.23) HY228 - CLYDE WINCH UPGRADE MODIFICATIONS		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	2	115,000.00	Y		
5.24) HY230 - NEXGEN HYDRAULIC POWER UNIT, MOD 6B		2023	TBD / TBD	C / TBD	** NO PCO **	Oct 2022	Oct 2023	2	105,300.00	Y		
5.25) HY232 - DECK SYSTEMS HYDRAULIC POWER UNIT UPGRADE		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	2	28,000.00	Y		

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5.25) HY232 - DECK SYSTEMS HYDRAULIC POWER UNIT UPGRADE		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	4	28,000.00	Y		
5.26) HY237 - COMMAND CONFERENCE CENTER		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	106,200.00	Y		
5.26) HY237 - COMMAND CONFERENCE CENTER		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	108,000.00	Y		
5.27) HY238 - SALVAGE EQUIPMENT TRANSPORT AND LANDING CRAFT		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	284,400.00	Y		
5.27) HY238 - SALVAGE EQUIPMENT TRANSPORT AND LANDING CRAFT		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	290,000.00	Y		
5.29) HY247 - HYDRAULLIC CHAIN HOIST (25 TON)		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	4	109,000.00	Y		
5.30) HY248 - HYDRAULIC CHAIN HOIST (50 TON)		2022	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Feb 2022	Feb 2023	2	129,000.00	Y		
5.30) HY248 - HYDRAULIC CHAIN HOIST (50 TON)		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	3	132,000.00	Y		
5.30) HY248 - HYDRAULIC CHAIN HOIST (50 TON)		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	2	136,000.00	Y		
5.31) HY265 - POWER GENERATOR 200 KW		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	207,000.00	Y		
5.32) HY266 - 600 CFM SALVAGE AIR COMPRESSOR (TIER 4)		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	166,000.00	Y		
5.32) HY266 - 600 CFM SALVAGE AIR COMPRESSOR (TIER 4)		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	169,000.00	Y		
5.34) HY268 - SALVAGE HYDRAULIC CUTTER SYSTEM		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	95,000.00	Y		
5.34) HY268 - SALVAGE HYDRAULIC CUTTER SYSTEM		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	97,000.00	Y		
5.35) HY269 - SALVAGE FIRE FIGHTING KIT		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	1	64,000.00	Y		
5.35) HY269 - SALVAGE FIRE FIGHTING KIT		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	2	65,000.00	Y		
5.37) HY282 - SALVAGE ROLLER BAG		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	239,000.00	Y		
5.38) HY283 - MAGNETIC PATCH KIT UPGRADES		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	133,000.00	Y		

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Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.39) HY284 - PIER/VOO FIRE FIGHTING SYSTEMS		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	356,000.00	Y		
5.40) HY285 - TOWING KIT		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	1	359,499.00	Y		
5.41) HY299 - UNDERWATER SHIP HUSBANDRY (UWSH) STORAGE & SHIPPING CONTAINERS		2023	TBD / TBD	TBD	** NO PCO **	Oct 2022	Oct 2023	7	31,000.00	Y		
5.41) HY299 - UNDERWATER SHIP HUSBANDRY (UWSH) STORAGE & SHIPPING CONTAINERS		2024	TBD / TBD	TBD	** NO PCO **	Oct 2023	Oct 2024	14	31,571.00	Y		

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats	**P-1 Line Item Number / Title:** 1210 / Standard Boats

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	858.948	135.226	88.562	74.963	0.000	74.963	100.070	79.388	76.820	78.771	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	858.948	135.226	88.562	74.963	0.000	74.963	100.070	79.388	76.820	78.771	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**858.948**	**135.226**	**88.562**	**74.963**	**0.000**	**74.963**	**100.070**	**79.388**	**76.820**	**78.771**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.113	0.022	-	-	-	-	0.363	0.233	-	-	0.731
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Naval Sea Systems Command (NAVSEA) -- Boats are procured to fill allowances established by CNO and NAVSEA and to replace boats now in service which are beyond economical repair at shore activities and aboard ships. Total inventory objectives change based on Fleet requirements.

H0001 BASE OPERATING FORCES

Force Protection Boat (Small) - Light gasoline twin outboard engine powered (up to 150 HP each) aluminum boats from 7 to 8.2 meters (24 to 27 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Can operate in areas where the environment (sea states/climatology) does not present a significant challenge. Service life is 7 years.

CNIC Force Protection Boat (Small) - Gasoline twin outboard engine aluminum boats approximately 8.5 meters (27 ft) in length with a narrow beam to aid in transport. Used primarily for fleet security, force protection/anti-terrorism, maritime interdiction and law enforcement operations at Naval activities and adjacent ports and waterways. The boats are provided with shouldering capabilities and foundations suitable for weapons. The boats operate primarily at Naval activities in sheltered harbors and waterways. Service life is 7 years.

CNIC Force Protection Boat (Medium) - Gasoline outboard engine powered aluminum boats approximately 10 meters (33 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations at Naval activities and adjacent ports and waterways duties. Needed for operations in areas where the environment (sea states/climatology) is significant enough to necessitate the larger boat and resultant larger engines to meet the performance/operational requirements. Service life is 7 years.

CNIC Force Protection Boat (Large) - Gasoline twin outboard engine powered aluminum boats approximately 11 meters (36 ft) in length with a wide beam used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Needed in areas where the environment (sea states/climatology) necessitates a larger boat for dependability. Service life is 7 years.

CNIC Workboat (Medium) - Diesel inboard-engine powered steel boats up to approximately 11 meters (36 ft) in length used primarily for multi-purpose workboat applications at Naval activities and adjacent ports and waterways duties, such as towing and pusher boat capabilities, line handling, harbor cleaning, and security barrier tending. Habitability, maneuverability and bollard pull power are commensurate

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats	P-1 Line Item Number / Title: 1210 / Standard Boats	
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

with operational requirements associated with barrier and moderately sized vessel assist (i.e., barges, boats, etc.). The Workboat (Medium) is capable of performing operations in areas where the operating environment (sea states/climatology) is not significant enough to necessitate the larger boat, but includes the capabilities necessary to meet operational requirements. Service life is 20 years.

CNIC Workboat (Large) - Diesel inboard-engine powered steel boats over approximately 11 meters (36 ft) in length used primarily for multi-purpose workboat applications at Naval activities and adjacent ports and waterways. Duties include towing and pusher tugboat capabilities, diver support, ship's husbandry, cargo carrier, personnel ferry, harbor cleaning, firefighting and security barrier tending. Habitability, maneuverability and bollard pull power are commensurate with operational requirements associated with large sized vessel assist (i.e., ships, derricks, etc.). The Workboat (Large) is needed for operations in areas where the operating environment (including sea states/climatology) is significant enough to necessitate the larger boat and include the capabilities necessary to meet operational requirements. Service life is 25 years.

CNIC Utility Boat (Small) - Gasoline outboard engine powered aluminum boats approximately 8 meters (26 ft) in length. Used for a variety of missions including search and rescue, craft maintenance, diver support, and transfer of personnel and light cargo. Service life is 10 years.

H0002 AMPHIBIOUS ASSAULT SHIPS

7M (24 ft) Rigid Inflatable Boat (RIB) - Diesel powered, primarily used as ship's lifeboats, search and rescue boats, liberty boats, and for general transportation on auxiliaries, combatants, carriers, amphibious, and shore activities. Also used for Anti-Terrorism/Force Protection (AT/FP) and Maritime Interdiction Operation/Vessel, Boarding, Search and Seizure (MIO/VBSS) operations. Service life is 12 years.

11M (36 ft) RIB - Carried as a ship's boat or assigned to a shore activity to perform a variety of operations including personnel and light cargo transfer, anchorage administration AT/FP operations and swimmer defense, visit/boarding/search and maritime interdiction, Amphibious Assault Vehicle (AAV) safety boat and Advanced Amphibious Assault Vehicle (AAAV) assist boat. Service life is 12 years.

H0003 EXPLOSIVE ORDNANCE DISPOSAL FORCES

Explosive Ordnance Disposal (EOD) Support Craft RIB - Used for area search, MK 5 and MK 16 Underwater Breathing Apparatus (UBA)/diving training, mammal operations, ordnance/mine recovery, parachute insertion support and command and control. Service life is 10 years.

11M (36 ft) EOD RIB - The 11M RIBs are required to support the emergent establishment of an enduring MK 18 unmanned underwater vehicle family of systems capability for near term operational missions in the shallow water and very shallow water environments in the Fifth Fleet area of responsibility. Operational missions include intelligence preparation of the operational environment/mine countermeasure missions. Service life is 7 to 10 years.

H0004 NAVAL SPECIAL WARFARE (NSW)

NSW Short Range Support Craft - Used in support of combat swimmer-diver training evolutions and the Special Warfare Combatant Craft (SWCC) basic crewman training curriculum. Service life is 10 years.

NSW Long Range Support Craft - SEAL combat swimmer/SEAL Delivery Vehicle (SDV)/surface swimmer safety craft for offshore/open ocean training support. Provides transportation to/from training areas, dive supervisor/event officer-in-charge/corpsman safety support platform and injured diver/swimmer egress platform for Naval Special Warfare. Service life is 10 years.

NSW RIB (formerly Enhanced Visit Board Search and Seizure (VBSS)) - Provide operational commander a capability to conduct VBSS and Maritime Interception Operations (MIO) from an Afloat Staging Base in conjunction with an overwatch craft and other friendly forces. Service life is 7 years.

H0005 RIVERINE ACTIVITIES

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats	**P-1 Line Item Number / Title:** 1210 / Standard Boats	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

40PB (formerly Patrol Boat (X)) - The craft will support maritime security operation missions and tasks such as harbor approach defense; high value unit transit escort operations; VBSS operations and overwatch; critical infrastructure protection; amphibious operations support; riverine operations; mine warfare support; embarked forces support (e.g., Special Operations Forces (SOF), EOD, United States Coast Guard (USCG) Law Enforcement Detachment (LEDET); and, Humanitarian Assistance/Disaster Relief (HA/DR) support. Twin diesel engine powered boat with a nominal length of 40 ft used to patrol green water littoral zones such as coastal water approaches, bays, major rivers, ports, and harbors. Service life is 15 to 20 years.

Coastal Riverine Force (CRF) Boat Simulator - Funding will be used to procure integrated virtual training simulators. These virtual simulators will provide training for MK VI and 40PB coxswains, navigators, engineers, and weapons personnel.

Riverine Multi-Mission Craft - Provides the Navy with, but not limited to, high value unit Escort, maritime infrastructure protection; coastal riverine security; VBSS, VBSS overwatch and/or mine warfare support. Service life is 8 years.

MK VI Patrol Boat - Naval Expeditionary Combat Command (NECC) Riverine Forces require a tactically sized, highly reliable, combatant craft capable of operating from land or maritime platforms. The mission of the MK VI is to provide the operational commander a capability to persistently patrol shallow littoral areas beyond sheltered harbors and bays, and into less sheltered open water out to the Departure Sea Area (DSA) for the purpose of force protection of friendly and coalition forces and critical infrastructure. Mission profiles may include: patrol of Maritime Pre-positioning Force (MPF) and Joint Logistics Over the Shore (JLOTS) anchorage and marshaling areas, offshore economic infrastructure Gulf Oil Platforms (GOPLATs), High-Value Asset (HVA) shipping escort, over watch of MIO/VBSS operations, Theater Security Cooperation (TSC), and Security Force Assistance (SFA). Service life is 7 to 10 years.

H0006 SUPPORT FORCES

7M (24 ft) RIB - Diesel powered, primarily used as ship's lifeboats, search and rescue boats, liberty boats, and for general transportation on auxiliaries, combatants, carriers, amphibious, and shore activities. Also used for AT/FP and MIO/VBSS operations. Service life is 12 years.

H0007 FLEET LOGISTICS SUPPORT

7M (24 ft) RIB - Diesel powered, primarily used as ship's lifeboats, search and rescue boats, liberty boats, and for general transportation on auxiliaries, combatants, carriers, amphibious, and shore activities. Also used for AT/FP and MIO/VBSS operations. Service life is 12 years.

H0008 NAVAL COASTAL WARFARE

Patrol Boat (Small) - Light gasoline twin outboard engine powered (up to 150 HP each) aluminum boats from 7 to 8.2 meters (24 to 27 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Can operate in areas where the environment (sea states/climatology) does not present a significant challenge. Service life is 7 years.

Patrol Boat (Large) - Twin diesel engine powered aluminum boats over 9 meters (30 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Needed in areas where the environment (sea states/climatology) necessitates a larger boat for dependability. Too heavy to meet the performance/operational requirements with outboard engines. Service life is 7 years.

H0009 SUBMARINE WARFARE

Dive Boat Replacement - Aluminum hull from 50 to 60 ft boat used in operations involving diving or the need to deploy support equipment at or near the water. Examples include dive operations focusing on underwater ships husbandry of Fleet assets, training, underwater survey and RDT&E, as well as, general ports and waterways operations, routine harbor maintenance and cleanup duties, and to assist in patrol, rescue, firefighting and picket operations. Service life: 15 to 20 years.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats	**P-1 Line Item Number / Title:** 1210 / Standard Boats	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

H0010 POLLUTION CONTROL EQUIPMENT

Oil Boom Platform - 30 ft Boom Platform (BP) Boat used for Oil Spill Response (OSR) operations, working in conjunction with 25 ft Utility Boats (UBs) and Rapid Response Skimmers (RRS). Typical mission requires UB and BP to sprint to the oil spill location ahead of the RRS. After spill assessment, 24" response boom (aboard BP) is tied off to UB, which is used to payout/deploy boom to surround spill while the RRS recovers the oil. BP crew delivers and unravels the boom during oil skimming operations. Typical mission duration is 3-8 hours. Service life is 10 years.

Utility Boats - 25 ft boats used for OSR operations, working in conjunction with Boom Platforms (BPs) and Rapid Response Skimmers (RRS). Typical mission requires UB and BP to sprint to the oil spill location ahead of the RRS. After spill assessment, 24" response boom (aboard BP) is tied off to UB, which is used to payout/deploy boom to surround spill while the RRS recovers the oil. UB crew tends boom during oil skimming operations, accessing boom over low gunwales or via dive door on UB. Typical mission duration is 3-8 hours. Service life is 10 years.

Rapid Response Skimmers - 30 ft boats used for OSR operations, working in conjunction with Boom Platforms (BPs) and Utility Boats (UBs). Typical mission requires UB and BP to sprint to the oil spill location ahead of the RRS. After spill assessment, 24" response boom (aboard BP) is tied off to UB, which is used to payout/deploy boom to surround spill while the RRS recovers the oil. The RRS "skims" the oil off of the top of the water and holds it in an onboard storage container for proper disposal and processing. Typical mission duration is 3-24 hours. Service life is 10 years.

H0011 WARFARE INTEGRATION

Workboat (Medium) - Diesel inboard-engine powered steel boats up to approximately 11 meters (36 ft) in length used primarily for multi-purpose workboat applications at Naval activities and adjacent ports and waterways duties, such as towing and pusher boat capabilities, line handling, harbor cleaning, and security barrier tending. Habitability, maneuverability and bollard pull power are commensurate with operational requirements associated with barrier and moderately sized vessel assist (i.e., barges, boats, etc.). The Workboat (Medium) is capable of performing operations in areas where the operating environment (sea states/climatology) is not significant enough to necessitate the larger boat, but includes the capabilities necessary to meet operational requirements. Service life is 20 years.

H0012 Training Activities

11M (36 ft) RIB - Carried as a ship's boat or assigned to a shore activity to perform a variety of operations including personnel and light cargo transfer, anchorage administration AT/FP operations and swimmer defense, visit/boarding/search and maritime interdiction, Amphibious Assault Vehicle (AAV) safety boat and Advanced Amphibious Assault Vehicle (AAAV) assist boat. Service life is 12 years.

CNIC Force Protection Boat (Medium) - Gasoline outboard engine powered aluminum boats approximately 10 meters (33 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations at Naval activities and adjacent ports and waterways duties. Needed for operations in areas where the environment (sea states/climatology) is significant enough to necessitate the larger boat and resultant larger engines to meet the performance/operational requirements. Service life is 7 years.

Naval Diving Salvage Training Command (NDSTC) Utility Boat - Used for training EOD technicians, Joint Service and Fleet Operators in support of area search, MK 5 and MK 16 Underwater Breathing Apparatus (UBA)/diving training, mammal operations, ordnance/mine recovery, parachute insertion support and command and control. Service life is 10 years.

H0830 PRODUCTION ENGINEERING

Production Engineering funds are used for engineering and technical support of boat and combatant craft acquisition and the development of integrated logistics support documentation to include technical data packages, provisioning, technical manuals, preventative maintenance documents and naval training systems plans. Technical support shall include acceptance trials, test and evaluation, inspections of production facilities, methods and quality assurance procedures and processes during and after construction. Additionally, official Navy boat inventory management, pre-delivery and post-delivery inspections and preparing documentation regarding boat and combatant craft procurement contract closeout and may be accomplished. Boats will not be safe or suitable to perform Navy boat and combatant craft missions if acquisition engineering technical support and integrated logistics support are not funded and completed. Boats will not be properly accounted for in accordance with the Department of Navy's instruction 4780.6E if boat inventory management is not provided.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats	**P-1 Line Item Number / Title:** 1210 / Standard Boats	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

H0CA5 DIVE BOATS

Aluminum hull from 50 to 60 ft boat used in operations involving diving or the need to deploy support equipment at or near the water. Examples include dive operations focusing on underwater ships husbandry of Fleet assets, training, underwater survey and RDT&E, as well as, general ports and waterways operations, routine harbor maintenance and cleanup duties, and to assist in patrol, rescue, firefighting and picket operations. Service life: 15 to 20 years.

H0CA6 RANGE SUPPORT CRAFT

Workboat type vessel to serve US Navy Weapons Systems Training and Validation, assisting fleet operations conducting acoustical, thermal and cross-section measurements and testing. Hulls to be steel or aluminum with aluminum superstructure and corrosion resistant systems, components and hardware to operate in industrial conditions with minimal maintenance. Sea kindliness underway and while loitering for extended periods are among the primary operational requirements. A large open workspace on the after deck with a retrieval ramp providing access to the water and appropriate weapons handling machinery. Weapons systems equipment to be handled includes missiles, torpedoes, surface and air launched Remotely Operated Vehicles (ROVs) and targets. Minimal freeboard height aft is necessary for crew safety while accessing and operating the weapons retrieval mechanism without compromising stability. The boat must be able to accommodate extreme loading conditions (i.e., from a full weapons load topside to light load). The boat must be as stable and as wide as possible to provide the inherent stability characteristics necessary to perform the operations and necessary to provide ergonomics for the crew and passengers. Requirements include communications, navigation and other electronics systems necessary to support the sophisticated training, validation and recording of specialized measurements to support a wide variety of operations. A Commercial Off The Shelf (COTS) boat built to recognize commercial standards can accomplish specific operational requirements for the mission. Service Life is 25 years.

H0CA7 40PB (formerly Patrol Boat (X))

The craft will support maritime security operation missions and tasks such as harbor approach defense; high value unit transit escort operations; VBSS operations and overwatch; critical infrastructure protection; amphibious operations support; riverine operations; mine warfare support; embarked forces support (e.g., Special Operations Forces (SOF), EOD, United States Coast Guard (USCG) Law Enforcement Detachment (LEDET); and, Humanitarian Assistance/Disaster Relief (HA/DR) support. Twin diesel engine powered boat with a nominal length of 40 ft used to patrol green water littoral zones such as coastal water approaches, bays, major rivers, ports, and harbors. Service life is 15 to 20 years.

H0CA8 Diesel Fuel Outboards

The Diesel Fuel Outboard Motor project supports the transition of the FY 2015 Rapid Innovation Fund "Affordable Multi-fuel Multi-engine Advanced Combatant Craft" program to the Explosive Ordnance Disposal Force. This technology minimizes the types of fuel required to increase standardization, flexibility, and interoperability during deployment while at the same time reduces total ownership cost. This technology is being transitioned to the Fleet by being installed aboard Explosive Ordnance Disposal Force Craft currently operating as well as for new procurements in the future.

H0CAB FORCE PROTECTION BOAT (SMALL)

Light gasoline twin outboard engine powered (up to 150 HP each) aluminum boats from 7 to 8.2 meters (24 to 27 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Can operate in areas where the environment (sea states/climatology) does not present a significant challenge. Service life is 7 years.

H0G86 OCO SUPPLEMENTAL

Current existing systems require replacements for boats due to excessive wear and tear. The boats are being maintained; however, they are not designed for the operational tempo (OPTEMPO) and harsh operating conditions in which they will be employed. The Force Protection Coastal (FPC) boats will provide capability called for in Visit, Board, Search and Seizure (VBSS) overwatch Urgent Operational Needs Statement (UONS) that cannot be met with existing boats. The Riverine Patrol boats, 7M EOD RIBS, and Force Protection (Large) are for boats already in theater.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats	**P-1 Line Item Number / Title:** 1210 / Standard Boats	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Coastal Riverine Force (CRF) 40PB (formerly Patrol Boat (X)) - The craft will support maritime security operation missions and tasks such as Harbor Approach Defense; high value unit transit escort operations; VBSS operations and overwatch; critical infrastructure protection; amphibious operations support; riverine operations; mine warfare support; Embarked Forces Support (e.g., SOF, EOD, USCG LEDET); and, Humanitarian Assistance/Disaster Relief (HA/DR) Support. Twin diesel engine powered boat with a nominal length of 40 ft used to patrol green water littoral zones such as coastal water approaches, bays, major rivers, ports, and harbors. Service life is 15 to 20 years. This begins the reset of twenty-four (24) over age and deteriorating patrol boats continuously deployed to CENTCOM in support of Operation Freedom's Sentinel - Theater (OFS-T). The craft are needed to maintain operational capability and readiness to support force protection and Intelligence, Surveillance and Reconnaissance (ISR) missions in CENTCOM for OFS-T.

Rigid Inflatable Boats (RIB) ISO Global Mine Warfare (MIW) Operations - OCO funding to support the purchase of one (1) 8.5M Rigid Inflatable Boat (RIB) to replace the Combat Rubber Rating Crafts (CRRCs) currently being utilized for global Unmanned Underwater Vehicle (UUV) inshore surveys. The larger RIBs are required due to the CRRCs not being designed for offshore use thus unsafe/unreliable in offshore maritime conditions, and severely limit maneuverability through most sea-states which is unsuitable for the majority of UUV surveys. RIBs are designed for offshore UUV survey requests. The RHIBs will greatly improve the ability to provide mission critical information aimed at protecting the Navy from underwater threats and support the increased naval demand in offshore operations. The project is in geographic area for MIW operations in support of a USCENTCOM requirement ("SPARTAN SHIELD"/FTN # 1190C066396)

H00UK62

HSMST (HIGH SPEED MANEUVERABLE SURFACE TARGET): Ukraine Presidential Drawdown Authority (PDA) funds to procure Anti-Submarine Warfare (ASW) range support equipment that includes self-propelled surface targets, towed surface targets, and associated target augmentation to mimic threats and/or provide feedback. Self-propelled surface targets include the High Speed Maneuverable Surface Target (HSMST). Provides the user with a medium to high speed remote controlled surface target with a high degree of maneuverability. It has a form fitted collar surrounding the deck area of the aluminum hull. This target can exceed 45 knots in a calm sea and approaches 40 knots in a sea state 3.

40PB (formerly Patrol Boat (X)): Ukraine Presidential Drawdown Authority (PDA) funds. The craft will support maritime security operation missions and tasks such as harbor approach defense; high value unit transit escort operations; VBSS operations and overwatch; critical infrastructure protection; amphibious operations support; riverine operations; mine warfare support; embarked forces support (e.g., Special Operations Forces (SOF), EOD, United States Coast Guard (USCG) Law Enforcement Detachment (LEDET); and, Humanitarian Assistance/Disaster Relief (HA/DR) support. Twin diesel engine powered boat with a nominal length of 40 ft used to patrol green water littoral zones such as coastal water approaches, bays, major rivers, ports, and harbors. Service life is 15 to 20 years.

Unmanned Vessels: Ukraine Presidential Drawdown Authority (PDA) funds. Unmanned Surface Vessel Medium and Large - Used in support of Unmanned Surface Vessel testing and demonstration at the Naval Surface Warfare Center, Carderock Division - Combatant Craft Division's Autonomy Lab & Integration Center (ALICe) to support Research and Development of Autonomous Capability for Unmanned Surface Vessels. Provides space for payloads for experimentation of autonomy for both harbor and offshore/open ocean environments. Service life is 10 years.

SSPBV Blocking Vessels

Blocking Vessels - 250' Off Shore Vessels (OSVs) also referred to as Blocking Vessels (BVs) operating at each Strategic Weapons Facility (Bangor, Washington and Kings Bay, Georgia). The Blocking Vessels are a key security component in the transit of SSBNs to and from the dive point. Service Life is 25 years.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats	**P-1 Line Item Number / Title:** 1210 / Standard Boats
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A / **Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A	

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Standard Boats	P-5a			- / 858.948	- / 135.226	- / 88.562	- / 74.963	- / -	- / 74.963
P-40	**Total Gross/Weapon System Cost**				**- / 858.948**	**- / 135.226**	**- / 88.562**	**- / 74.963**	**- / 0.000**	**- / 74.963**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Funds baseline programs to provide boats established by CNO and NAVSEA.

- FY 2022 increase of $77.508 million provided by the Presidential Drawdown Authority for assistance to Ukraine.
- FY 2023 increase of $20.000 million for 40-foot patrol boat, $2.000 million for diesel fuel outboard motor testing, and $9.300 million for small boat engine upgrades provided by the Department of Defense Appropriations Act, 2023.
- FY 2024 increase of $8.328 million for additional Naval Special Warfare (NSW) Short Range Support Craft.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	P-1 Line Item Number / Title: 1210 / Standard Boats	Aggregated Items Title: Standard Boats

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) H0001 - Base Operating Forces																				
1.1) Force Protection Small	A		3,387K	3	10.161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) CNIC Force Protection (Small)(†)	A		382,090.91	11	4.203	447,666.67	3	1.343	465,666.67	3	1.397	475,000.00	3	1.425	-	-	-	475,000.00	3	1.425
1.3) CNIC Force Protection (Medium)(†)	A		507,928.57	112	56.888	512,000.00	9	4.608	532,500.00	8	4.260	543,125.00	8	4.345	-	-	-	543,125.00	8	4.345
1.4) CNIC Force Protection (Large) (1)(†)	A		11,379K	3	34.136	925,333.33	3	2.776	962,333.33	3	2.887	981,400.00	5	4.907	-	-	-	981,400.00	5	4.907
1.5) CNIC Workboat (Medium) (2)(†)	A		993,870.97	31	30.810	1,011K	4	4.043	1,052K	2	2.103	1,072K	3	3.217	-	-	-	1,072K	3	3.217
1.6) CNIC Workboat (Large)(†)	A		1,685K	19	32.006	1,808K	1	1.808	1,880K	2	3.760	-	-	-	-	-	-	-	-	-
Subtotal: 1) H0001 - Base Operating Forces			**-**	**-**	***168.204***	**-**	**-**	***14.578***	**-**	**-**	***14.407***	**-**	**-**	***13.894***	**-**	**-**	**-**	**-**	**-**	***13.894***
2) H0002 - Amphibious Assault Ships																				
2.1) 7M (24 ft) Rigid Inflatable Boat (RIB) (3)(†)	A		213,769.23	13	2.779	220,500.00	4	0.882	229,333.33	6	1.376	234,000.00	10	2.340	-	-	-	234,000.00	10	2.340
2.2) 11M (36 ft) RIB (4)(†)	A		943,150.00	20	18.863	-	-	-	876,000.00	1	0.876	893,333.33	3	2.680	-	-	-	893,333.33	3	2.680
Subtotal: 2) H0002 - Amphibious Assault Ships			**-**	**-**	***21.642***	**-**	**-**	***0.882***	**-**	**-**	***2.252***	**-**	**-**	***5.020***	**-**	**-**	**-**	**-**	**-**	***5.020***
3) H0003 - Explosive Ordnance Forces																				
3.1) EOD Support Craft RIB (5)(†)	A		420,762.71	59	24.825	801,000.00	10	8.010	833,000.00	11	9.163	849,705.88	17	14.445	-	-	-	849,705.88	17	14.445
3.2) 11M EOD RIB(†)	A		1,185K	27	32.004	1,460K	4	5.840	1,518K	4	6.074	1,549K	4	6.195	-	-	-	1,549K	4	6.195
Subtotal: 3) H0003 - Explosive Ordnance Forces			**-**	**-**	***56.829***	**-**	**-**	***13.850***	**-**	**-**	***15.237***	**-**	**-**	***20.640***	**-**	**-**	**-**	**-**	**-**	***20.640***
4) H0004 - Naval Special Warfare																				
4.1) NSW Long Range Support Craft(†)	A		355,942.03	69	24.560	367,333.33	3	1.102	382,000.00	3	1.146	389,666.67	3	1.169	-	-	-	389,666.67	3	1.169
4.2) NSW Short Range Support Craft (6)(†)	A		464,257.14	35	16.249	365,125.00	7	2.556	379,800.00	5	1.899	387,428.57	29	11.235	-	-	-	387,428.57	29	11.235
4.3) NSW RIB	A		1,021K	14	14.295	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) H0004 - Naval Special Warfare			**-**	**-**	***55.104***	**-**	**-**	***3.658***	**-**	**-**	***3.045***	**-**	**-**	***12.404***	**-**	**-**	**-**	**-**	**-**	***12.404***
5) H0005 - Riverine Activities																				

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	P-1 Line Item Number / Title: 1210 / Standard Boats	Aggregated Items Title: Standard Boats

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
5.1) 40PB (7)(†)	A		2,759K	23	63.458	3,440K	3	10.320	3,578K	2	7.155	3,649K	3	10.948	-	-	-	3,649K	3	10.948
5.2) 40PB Production Support-Logistics-Inventory Mgmt-GFE-Spares	A		-	-	2.012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.3) 40PB Spares/ Design rights	A		-	-	1.100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.4) CRF Boat Simulator(†)	A		3,000K	2	6.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.5) Riverine Multi-Mission Craft	A		4,085K	11	44.936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.6) MK VI Patrol Boat	A		8,217K	3	24.651	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) H0005 - Riverine Activities			**-**	**-**	***142.157***	**-**	**-**	***10.320***	**-**	**-**	***7.155***	**-**	**-**	***10.948***	**-**	**-**	**-**	**-**	**-**	***10.948***
6) H0006 - Support Forces																				
6.1) 7M (24 ft) RIB(†)	A		260,396.23	159	41.403	220,538.46	13	2.867	229,384.62	13	2.982	234,000.00	13	3.042	-	-	-	234,000.00	13	3.042
Subtotal: 6) H0006 - Support Forces			**-**	**-**	***41.403***	**-**	**-**	***2.867***	**-**	**-**	***2.982***	**-**	**-**	***3.042***	**-**	**-**	**-**	**-**	**-**	***3.042***
7) H0007 - Fleet Logistics Support																				
7.1) 7M (24 ft) RIB(†)	A		281,866.67	30	8.456	220,666.67	3	0.662	229,333.33	3	0.688	234,000.00	3	0.702	-	-	-	234,000.00	3	0.702
Subtotal: 7) H0007 - Fleet Logistics Support			**-**	**-**	***8.456***	**-**	**-**	***0.662***	**-**	**-**	***0.688***	**-**	**-**	***0.702***	**-**	**-**	**-**	**-**	**-**	***0.702***
8) H0008 - Naval Coastal Warfare																				
8.1) Reserve Patrol Boat Small	A		-	-	0.681	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.2) Reserve Patrol Boat Large	A		1,227K	3	3.680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 8) H0008 - Naval Coastal Warfare			**-**	**-**	***4.361***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
9) H0009 - Submarine Warfare																				
9.1) Dive Boat Replacement(†)	A		2,026K	14	28.367	2,905K	1	2.905	3,021K	1	3.021	-	-	-	-	-	-	-	-	-
Subtotal: 9) H0009 - Submarine Warfare			**-**	**-**	***28.367***	**-**	**-**	***2.905***	**-**	**-**	***3.021***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
10) H0010 - Pollution Control Equipment																				
10.1) Oilboom Platform(†)	A		195,800.00	20	3.916	208,000.00	4	0.832	216,500.00	4	0.866	220,750.00	4	0.883	-	-	-	220,750.00	4	0.883
10.2) Utility Boats(†)	A		140,813.95	43	6.055	151,888.89	8	1.215	158,000.00	9	1.422	161,111.11	9	1.450	-	-	-	161,111.11	9	1.450
10.3) Rapid Response Skimmer(†)	A		398,709.68	31	12.360	441,000.00	2	0.882	459,000.00	2	0.918	468,000.00	2	0.936	-	-	-	468,000.00	2	0.936

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	P-1 Line Item Number / Title: 1210 / Standard Boats	Aggregated Items Title: Standard Boats

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
10.4) OSR OB Engine(†)	A		10,214.29	14	0.143	10,500.00	5	0.053	10,500.00	1	0.011	10,750.00	4	0.043	-	-	-	10,750.00	4	0.043
Subtotal: 10) H0010 - Pollution Control Equipment			**-**	**-**	***22.474***	**-**	**-**	***2.982***	**-**	**-**	***3.217***	**-**	**-**	***3.312***	**-**	**-**	**-**	**-**	**-**	***3.312***
11) H0011 - Warfare Integration																				
11.1) Workboat (Medium)(†)	A		991,000.00	3	2.973	1,011K	3	3.033	1,051K	3	3.154	1,072K	3	3.217	-	-	-	1,072K	3	3.217
Subtotal: 11) H0011 - Warfare Integration			**-**	**-**	***2.973***	**-**	**-**	***3.033***	**-**	**-**	***3.154***	**-**	**-**	***3.217***	**-**	**-**	**-**	**-**	**-**	***3.217***
12) H0012 - Training Activities																				
12.1) 11M (36ft) RIB(†)	A		-	-	-	842,000.00	1	0.842	876,000.00	1	0.876	-	-	-	-	-	-	-	-	-
12.3) NDSTC Utility Boat (8)(†)	A		-	-	-	-	-	-	-	-	-	476,000.00	2	0.952	-	-	-	476,000.00	2	0.952
Subtotal: 12) H0012 - Training Activities			**-**	**-**	***0.000***	**-**	**-**	***0.842***	**-**	**-**	***0.876***	**-**	**-**	***0.952***	**-**	**-**	**-**	**-**	**-**	***0.952***
13) H0830 - Production Engineering																				
13.1) Production Engineering	A		-	-	10.298	-	-	0.803	-	-	0.841	-	-	0.464	-	-	-	-	-	0.464
13.2) Production Engineering (Naval Coastal Warfare)	A		-	-	0.391	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 13) H0830 - Production Engineering			**-**	**-**	***10.689***	**-**	**-**	***0.803***	**-**	**-**	***0.841***	**-**	**-**	***0.464***	**-**	**-**	**-**	**-**	**-**	***0.464***
14) H0900 - Consulting Services																				
14.1) Consulting Services	A		-	-	7.955	-	-	0.336	-	-	0.387	-	-	0.368	-	-	-	-	-	0.368
14.2) Consulting Services (Naval Coastal Warfare)	A		-	-	0.289	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 14) H0900 - Consulting Services			**-**	**-**	***8.244***	**-**	**-**	***0.336***	**-**	**-**	***0.387***	**-**	**-**	***0.368***	**-**	**-**	**-**	**-**	**-**	***0.368***
15) H0CA5 - Dive Boats																				
15.1) Dive Boats	A		2,259K	3	6.777	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 15) H0CA5 - Dive Boats			**-**	**-**	***6.777***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
16) H0CA6 - Range Support Craft																				
16.1) Range Support Craft	A		18,362K	2	36.723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 16) H0CA6 - Range Support Craft			**-**	**-**	***36.723***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
17) H0CA7 - 40PB																				
17.1) 40PB(†)	A		-	-	-	-	-	-	3,578K	5	17.890	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	P-1 Line Item Number / Title: 1210 / Standard Boats	Aggregated Items Title: Standard Boats

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
17.2) 40PB Production Support-Logistics-Inventory Mgmt-GFE-Spares	A		-	-	-	-	-	-	-	-	2.110	-	-	-	-	-	-	-	-	-
Subtotal: 17) H0CA7 - 40PB			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***20.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
18) H0CA8 - Diesel Fuel Outboards																				
18.1) Diesel Fuel Outboards Upgrades(†)	A		-	-	-	-	-	-	116,250.00	80	9.300	-	-	-	-	-	-	-	-	-
18.2) Diesel Fuel Outboard Motor Testing / Integration	A		-	-	-	-	-	-	-	-	2.000	-	-	-	-	-	-	-	-	-
Subtotal: 18) H0CA8 - Diesel Fuel Outboards			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***11.300***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
19) H0CAB - Force Protection Boat (Small)																				
19.1) Force Protection Boat (Small)	A		-	-	2.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.2) Small Escort Vessels (33')	A		-	-	9.979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 19) H0CAB - Force Protection Boat (Small)			**-**	**-**	***11.979***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
20) H0G86 - OCO																				
20.1) OCO - Patrol Boat (Large) (Reserve)	A		651,000.00	2	1.302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.2) OCO - RIBS	A		500,000.00	2	1.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.3) OCO - 7M EOD RIBs (Reserve)	A		234,000.00	6	1.404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.4) OCO - Force Protection - Coastal (Reserve)	A		4,000K	5	20.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.5) Coastal Riverine Force (CRF) - 40PB(†)	A		2,502K	22	55.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.6) 40PB Production Support-Logistics-Inventory Mgmt-GFE-Spares	A		-	-	0.414	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.7) RIB - Global Mine	A		476,000.00	1	0.476	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 20) H0G86 - OCO			**-**	**-**	***79.646***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
21) Ukraine Presidential Drawdown Authority (PDA)																				
21.1) 40PB(†)	A		-	-	-	3,440K	18	61.920	-	-	-	-	-	-	-	-	-	-	-	-
21.2) 40PB Production Support-	A		-	-	-	-	-	2.938	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	**P-1 Line Item Number / Title:** 1210 / Standard Boats	**Aggregated Items Title:** Standard Boats

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Logistics-Inventory Mgmt-GFE-Spares																				
21.3) Targets(†)	A		-	-	-	253,333.33	15	3.800	-	-	-	-	-	-	-	-	-	-	-	-
21.4) Unmanned Vessels(†)	A		-	-	-	4,425K	2	8.850	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 21) Ukraine Presidential Drawdown Authority (PDA)			**-**	**-**	***0.000***	**-**	**-**	***77.508***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
22) SSPBV																				
22.1) Blocking Vessels	A		38,230K	4	152.920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 22) SSPBV			**-**	**-**	***152.920***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**858.948**	**-**	**-**	**135.226**	**-**	**-**	**88.562**	**-**	**-**	**74.963**	**-**	**-**	**-**	**-**	**-**	**74.963**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(1) The increase in quantity is to replace the backlog of craft that are beyond economical repair and are past their established service life.

(2) The increase in quantity is to replace the backlog of craft that are beyond economical repair and are past their established service life.

(3) The increase in quantity is to replace the backlog of craft that are beyond economical repair and are past their established service life.

(4) The increase in quantity is to replace the backlog of craft that are beyond economical repair and are past their established service life.

(5) The increase in quantity is to replace the backlog of craft that are beyond economical repair and are past their established service life.

(6) The increase in quantity is to replace the backlog of craft that are beyond economical repair and are past their established service life.

(7) The increase in quantity is to replace the backlog of craft that are beyond economical repair and are past their established service life.

(8) The increase in quantity is to replace the backlog of craft that are beyond economical repair and are past their established service life.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	P-1 Line Item Number / Title: 1210 / Standard Boats	Aggregated Items: Standard Boats

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) H0001 - Base Operating Forces												
1.2) CNIC Force Protection (Small)		2022	MetalCraft / Watertown, NY	C / IDIQ	NAVSEA	Mar 2022	Feb 2023	3	447,666.67	N		
1.2) CNIC Force Protection (Small)		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Feb 2024	3	465,666.67	N		
1.2) CNIC Force Protection (Small)		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Feb 2025	3	475,000.00	N		
1.3) CNIC Force Protection (Medium)		2022	Lake Assault Boats / Superior, WI	C / IDIQ	NAVSEA	Oct 2021	Oct 2022	9	512,000.00	N		
1.3) CNIC Force Protection (Medium)		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Jan 2024	8	532,500.00	N		
1.3) CNIC Force Protection (Medium)		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Jan 2025	8	543,125.00	N		
1.4) CNIC Force Protection (Large) (1)		2022	MetalCraft / Watertown, NY	C / IDIQ	NAVSEA	Mar 2022	Mar 2023	3	925,333.33	N		
1.4) CNIC Force Protection (Large) (1)		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Feb 2024	3	962,333.33	N		
1.4) CNIC Force Protection (Large) (1)		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Feb 2025	5	981,400.00	N		
1.5) CNIC Workboat (Medium) (2)		2022	Snow & Company / Seattle, WA	C / IDIQ	NAVSEA	Jan 2022	Jan 2023	4	1,011K	N		
1.5) CNIC Workboat (Medium) (2)		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Apr 2024	2	1,052K	N		
1.5) CNIC Workboat (Medium) (2)		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Apr 2025	3	1,072K	N		
1.6) CNIC Workboat (Large)		2022	Snow & Company / Seattle, WA	C / IDIQ	NAVSEA	Nov 2021	Sep 2023	1	1,808K	N		
1.6) CNIC Workboat (Large)		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Sep 2024	2	1,880K	N		
2) H0002 - Amphibious Assault Ships												
2.1) 7M (24 ft) Rigid Inflatable Boat (RIB) (3)		2022	RIBCRAFT / Marblehead, MA	C / IDIQ	NAVSEA	Mar 2022	Apr 2023	4	220,500.00	N		
2.1) 7M (24 ft) Rigid Inflatable Boat (RIB) (3)		2023	TBD / TBD	C / IDIQ	NAVSEA	Mar 2023	Oct 2023	6	229,333.33	N		
2.1) 7M (24 ft) Rigid Inflatable Boat (RIB) (3)		2024	TBD / TBD	C / IDIQ	NAVSEA	Mar 2024	Oct 2024	10	234,000.00	N		
2.2) 11M (36 ft) RIB (4)		2023	RIBCRAFT / Marblehead, MA	C / IDIQ	NAVSEA	Feb 2023	Apr 2024	1	876,000.00	N		
2.2) 11M (36 ft) RIB (4)		2024	TBD / TBD	C / IDIQ	NAVSEA	May 2024	Feb 2025	3	893,333.33	N		
3) H0003 - Explosive Ordnance Forces												
3.1) EOD Support Craft RIB (5)		2022	USMI / Gulfport, MS	C / IDIQ	NAVSEA	May 2022	May 2023	10	801,000.00	N		
3.1) EOD Support Craft RIB (5)		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Dec 2023	11	833,000.00	N		

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	P-1 Line Item Number / Title: 1210 / Standard Boats	Aggregated Items: Standard Boats

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3.1) EOD Support Craft RIB (5)		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Dec 2024	17	849,705.88	N		
3.2) 11M EOD RIB		2022	RIBCRAFT / Marblehead, MA	C / IDIQ	NAVSEA	Jul 2022	Feb 2024	4	1,460K	N		
3.2) 11M EOD RIB		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Feb 2024	4	1,518K	N		
3.2) 11M EOD RIB		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Feb 2025	4	1,549K	N		
4) H0004 - Naval Special Warfare												
4.1) NSW Long Range Support Craft		2022	Silverships / Theodore, AL	C / IDIQ	NAVSEA	Jan 2022	Jan 2023	3	367,333.33	N		
4.1) NSW Long Range Support Craft		2023	TBD / TBD	C / IDIQ	NAVSEA	May 2023	Nov 2023	3	382,000.00	N		
4.1) NSW Long Range Support Craft		2024	TBD / TBD	C / IDIQ	NAVSEA	May 2024	Nov 2024	3	389,666.67	N		
4.2) NSW Short Range Support Craft (6)		2022	Silverships / Theodore, AL	C / IDIQ	NAVSEA	Jan 2022	Jan 2023	7	365,125.00	N		
4.2) NSW Short Range Support Craft (6)		2023	TBD / TBD	C / IDIQ	NAVSEA	May 2023	Dec 2023	5	379,800.00	N		
4.2) NSW Short Range Support Craft (6)		2024	TBD / TBD	C / IDIQ	NAVSEA	May 2024	Dec 2024	29	387,428.57	N		
5) H0005 - Riverine Activities												
5.1) 40PB (7)		2020	Gravois Aluminum Boats / Jeanerette, LA	C / IDIQ	NAVSEA	Jul 2020	Aug 2023	4	3,054K	N		
5.1) 40PB (7)		2021	Gravois Aluminum Boats / Jeanerette, LA	C / IDIQ	NAVSEA	Feb 2021	Mar 2024	2	3,115K	N		
5.1) 40PB (7)		2022 (9)	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Jun 2024	3	3,440K	N		
5.1) 40PB (7)		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	May 2024	2	3,578K	N		
5.1) 40PB (7)		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	May 2025	3	3,649K	N		
5.4) CRF Boat Simulator		2020	Aero Simulation / Tampa, FL	C / FFP	NAWCTSD	Oct 2021	Jul 2023	2	3,000K	N		
6) H0006 - Support Forces												
6.1) 7M (24 ft) RIB		2022	RIBCRAFT / Marblehead, MA	C / IDIQ	NAVSEA	Mar 2022	Apr 2023	13	220,538.46	N		
6.1) 7M (24 ft) RIB		2023	TBD / TBD	C / IDIQ	NAVSEA	Mar 2023	Oct 2023	13	229,384.62	N		
6.1) 7M (24 ft) RIB		2024	TBD / TBD	C / IDIQ	NAVSEA	Mar 2024	Oct 2024	13	234,000.00	N		
7) H0007 - Fleet Logistics Support												
7.1) 7M (24 ft) RIB		2022	RIBCRAFT / Marblehead, MA	C / IDIQ	NAVSEA	Mar 2022	Apr 2023	3	220,666.67	N		
7.1) 7M (24 ft) RIB		2023	TBD / TBD	C / IDIQ	NAVSEA	Mar 2023	Oct 2023	3	229,333.33	N		
7.1) 7M (24 ft) RIB		2024	TBD / TBD	C / IDIQ	NAVSEA	Mar 2024	Oct 2024	3	234,000.00	N		
9) H0009 - Submarine Warfare												

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	P-1 Line Item Number / Title: 1210 / Standard Boats	Aggregated Items: Standard Boats

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
9.1) Dive Boat Replacement		2021	Modutech / Tacoma, WA	C / IDIQ	NAVSEA	Aug 2021	Feb 2023	1	2,849K	N		
9.1) Dive Boat Replacement		2022	TBD / TBD	C / IDIQ	NAVSEA	May 2023	May 2024	1	2,905K	N		
9.1) Dive Boat Replacement		2023	TBD / TBD	C / IDIQ	NAVSEA	May 2023	May 2024	1	3,021K	N		
10) H0010 - Pollution Control Equipment												
10.1) Oilboom Platform		2022	Metal Craft Marine, Inc. / Cape Vincent NY	C / IDIQ	NAVSEA	Mar 2022	Jan 2023	4	208,000.00	N		
10.1) Oilboom Platform		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Dec 2023	4	216,500.00	N		
10.1) Oilboom Platform		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Dec 2024	4	220,750.00	N		
10.2) Utility Boats		2022	Metal Craft Marine, Inc. / Cape Vincent NY	C / IDIQ	NAVSEA	Mar 2022	Feb 2023	8	151,888.89	N		
10.2) Utility Boats		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Nov 2023	9	158,000.00	N		
10.2) Utility Boats		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Nov 2024	9	161,111.11	N		
10.3) Rapid Response Skimmer		2022	Lake Assault Boats / Superior, WI	C / IDIQ	NAVSEA	Aug 2022	Jul 2024	2	441,000.00	N		
10.3) Rapid Response Skimmer		2023	Lake Assault Boats / Superior, WI	C / IDIQ	NAVSEA	Jan 2023	Jan 2024	2	459,000.00	N		
10.3) Rapid Response Skimmer		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Dec 2024	2	468,000.00	N		
10.4) OSR OB Engine		2022	DLA / Philadelphia, PA	MIPR	NAVSEA	Jun 2022	Nov 2022	5	10,500.00	N		
10.4) OSR OB Engine		2023	TBD / TBD	MIPR	NAVSEA	Jun 2023	Nov 2023	1	10,500.00	N		
10.4) OSR OB Engine		2024	TBD / TBD	MIPR	NAVSEA	Jun 2024	Nov 2024	4	10,750.00	N		
11) H0011 - Warfare Integration												
11.1) Workboat (Medium)		2022	Snow & Company / Seattle, WA	C / IDIQ	NAVSEA	Jan 2022	Jan 2023	3	1,011K	N		
11.1) Workboat (Medium)		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Apr 2024	3	1,051K	N		
11.1) Workboat (Medium)		2024	TBD / TBD	C / IDIQ	NAVSEA	Jun 2024	Apr 2025	3	1,072K	N		
12) H0012 - Training Activities												
12.1) 11M (36ft) RIB		2022	RIBCRAFT / Marblehead, MA	C / IDIQ	NAVSEA	Feb 2023	Apr 2024	1	842,000.00	N		
12.1) 11M (36ft) RIB		2023	RIBCRAFT / Marblehead, MA	C / IDIQ	NAVSEA	Feb 2023	Apr 2024	1	876,000.00	N		
12.3) NDSTC Utility Boat (8)		2024	TBD / TBD	C / FFP	NAVSEA	Jun 2024	Mar 2025	2	476,000.00	N		
17) H0CA7 - 40PB												
17.1) 40PB		2023	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Aug 2024	5	3,578K	N		
18) H0CA8 - Diesel Fuel Outboards												
18.1) Diesel Fuel Outboards Upgrades		2023	TBD / TBD	MIPR	NAVSEA	May 2023	Jan 2024	80	116,250.00	N		
20) H0G86 - OCO												
20.5) Coastal Riverine Force (CRF) - 40PB	✓	2021	Gravois Aluminum Boats, LLC / Jeanerette, LA	C / IDIQ	NAVSEA	Feb 2021	Nov 2024	6	3,115K	N		
21) Ukraine Presidential Drawdown Authority (PDA)												

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	P-1 Line Item Number / Title: 1210 / Standard Boats	Aggregated Items: Standard Boats

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
21.1) 40PB		2022	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Aug 2024	18	3,440K	N		
21.3) Targets		2022	TBD / TBD	C / IDIQ	NAVSEA	Jun 2023	Feb 2024	15	253,333.33	N		
21.4) Unmanned Vessels		2022	TBD / TBD	C / FFP	NAVSEA	Jul 2023	Jul 2024	2	4,425K	N		

Footnotes:

(9) Shifted contract award to coincide with 40PB procurement from Ukraine PDA addition (item number 21.1).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 14: Production Facilities Equipment	**P-1 Line Item Number / Title:** 1445 / Operating Forces IPE

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,199.456	460.822	174.743	187.495	0.000	187.495	191.184	191.393	304.165	310.557	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,199.456	460.822	174.743	187.495	0.000	187.495	191.184	191.393	304.165	310.557	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,199.456**	**460.822**	**174.743**	**187.495**	**0.000**	**187.495**	**191.184**	**191.393**	**304.165**	**310.557**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Capital Investment Program, as part of the Shipyard Infrastructure Optimization Program (SIOP) and Fleet Maintenance Investment Program, improves maintenance capabilities at the activities and is integral to the Nuclear Enterprise. The program modernizes equipment infrastructure, improves maintenance activity productivity and throughput, eliminates rework costs to the fleet, and contributes to maintaining cost and schedule on aircraft carrier, surface ship, and submarine availabilities.

The Operating Forces Industrial Plant Equipment (IPE) budget funds capitalized personal property procurements for the naval shipyards and Fleet I-level maintenance activities. These procurements provide modern innovative equipment required to support submarine, aircraft carrier, and surface ship maintenance, eliminating reliance on significantly aged and obsolete IPE, weight handling equipment, and nuclear support equipment infrastructure.
The IPE funding, as part of SIOP, also supports new-mission capital equipment requirements, including Virginia Class repairs at Norfolk Naval Shipyard (NNSY), Portsmouth Naval Shipyard (PNSY) and Pearl Harbor Naval Shipyard (PHNSY), as well as Los Angeles Class Service Life Extension Refueling Overhauls specific to PNSY. This budget also funds the procurement and technical refresh upgrades of all Integrated Condition Assessment System (ICAS) hardware and software aboard Surface Fleet hulls as well as the Navy Maritime Maintenance Enterprise Solution (NMMES) which support aircraft carriers, DDGs, Los Angeles, Ohio, and Sea Wolf class vessels. NMMES is a strategic investment that has standardized NAVSEA and fleet ship maintenance functions ashore, controlling and managing all aspects of ship maintenance at the naval shipyards, Regional Maintenance Centers, and Ship Repair Facilities worldwide.

[P40A / KN200: NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION SUSTAINMENT]: This funding supports the Navy Maritime Maintenance Enterprise Solution (NMMES), a strategic information technology investment that has standardized NAVSEA and Fleet ship maintenance functions ashore, controlling and managing all aspects of ship maintenance at the Naval Shipyards, Regional Maintenance Centers (RMCs), and Ship Repair Facilities. Depot and Intermediate Level maintenance business processes to schedule, execute, monitor, certify work, and pay employees at aircraft carrier, submarine, and ship maintenance activities are codified within the NMMES toolset. Additionally, NMMES is utilized to manage finance, supply, shop workflow, configuration management, environmental health & safety, quality assurance, up-line management reporting and other functions. NMMES standardizes and institutionalizes the Navy's ship and submarine maintenance business practice processes. These processes are fully embedded in the NMMES IT systems to gain efficiencies in the maintenance process. NMMES systems provide the functionality and processes to continually address the maintenance needs of the Fleet, and have a critical role in the efficient brokering, planning, material ordering, financial performance, and execution of shore maintenance. This sustainment funding will support procurement of commercial-off-the-shelf (COTS) hardware and software in support of NMMES IT applications.

[P40A / KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)]: Provides funding for the SIOP Capital Investment Program (CIP) in support of the consolidated Naval Shipyard and Intermediate Maintenance Facilities (IMF) requirements at the four Naval Shipyards. Funds will be used for the procurement and execution of Class 3 & 4 plant and personal property projects to maintain, modernize and

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 14: Production Facilities Equipment	**P-1 Line Item Number / Title:** 1445 / Operating Forces IPE	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

improve the infrastructure and industrial base at the Naval Shipyard/IMF activities. Funding will allow for the acquisition of equipment and OP,N related Automated Data Processing (ADP) Hardware/Software necessary to perform the mission of repairing, conversion, and modernization of fleet ships and submarines in the most economical, efficient, environmentally sound and safe manner possible. Continued reliance on an aged capital equipment infrastructure increases submarine and aircraft carrier depot maintenance availability costs and places schedules at risk. Shipyard capital equipment investments are in accordance with the January 2023 Shipyard Infrastructure Optimization Plan Report to Congress as well as supporting new mission requirements.

Budget year equipment requirements provided in this exhibit are based on current Shipyard priorities to best improve submarine and aircraft carrier availability execution within currently projected budget. Projected costs are best government estimates based on market research and are subject to change. Changes to program funding, realized costs, and/or realization of emergent Shipyard equipment requirements after budget submittal could impact the requirements identified in this exhibit.

[P40A / SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)]: Improved maintenance capabilities at the Naval Shipyards are integral to the Nuclear Enterprise. Procurement of new and efficiency-enabling capital equipment to repair CVNs and submarines in accordance with the February 2018 Shipyard Infrastructure Optimization Plan Report to Congress contributes to decreasing availability costs and schedules, ultimately returning mission days to the Fleet and moving the needle on Shipyard throughput. The KN300 SIOP Capital Investment Program funding includes the $150M/year capital equipment modernization requirement provided in the February 2018 Shipyard Infrastructure Optimization Program (SIOP) Report to Congress, in addition to new mission investments required to execute LOS ANGELES Class refueling service life extensions at PNSY, which is critical to supporting the 355 ship fleet. The Operating Forces IPE Budget for the Shipyard Capital Investment Program identifies individual component costs for acquisitions over $10M.

FY24 SIOP CIP funding of $137,282 is required to support the procurement of capital equipment for the naval shipyards and Fleet I-level maintenance activities. These procurements will support submarine, aircraft carrier and surface ship maintenance. This equipment will eliminate reliance on significantly aged and obsolete Industrial Plant Equipment, weight handling equipment and nuclear support equipment infrastructure. Examples of projects, include - but not limited to - Reactor Servicing Complexes, Shaft lathes, plasma fabrication centers, pump test stands, air compressors.

[P40A / 175 TON HEAVY LIFT PORTAL CRANE]: FY23 NNSY and FY24 PSNS 175-ton SIOP heavy lift portal crane acquisitions recapitalize existing shipyard assets that are in poor material condition, beyond maximum expected service life, and are experiencing repair parts obsolescence issues. These heavy lift portal cranes are required for critical path submarine and CVN nuclear defueling weight handling evolutions that can't be executed using the remaining lower capacity portal crane Fleet as well as supporting all depot maintenance lifting and handling requirements.

[P40A / KNCA1: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP) CONGRESSIONAL ADD]: Provides FY22 funding for the SIOP Capital Investment Program (CIP) in support of the consolidated Naval Shipyard and Intermediate Maintenance Facilities (IMF) requirements at the four Naval Shipyards. KNCA1 captures FY22 congressional add funding provided to accelerate shipyard infrastructure optimization, breaking out individual component costs for acquisitions over $10M. Funds will be used for the procurement and execution of Class 3 & 4 plant and personal property projects to maintain, modernize and improve the infrastructure and industrial base at the mission funded Naval Shipyard/IMF activities. Funding will allow for the acquisition of equipment and OPN related Automated Data Processing (ADP) Hardware/ Software necessary to perform the mission of repairing, conversion, and modernization of fleet ships and submarines in the most economical, efficient, environmentally sound and safe manner possible. Continued reliance on an aged capital equipment infrastructure increases submarine and aircraft carrier depot maintenance availability costs and places schedules at risk.

[P40A / SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP) CONGRESSIONAL ADD]: FY22 Improved maintenance capabilities at the Naval Shipyards are integral to the Nuclear Enterprise. Procurement of new and efficiency-enabling capital equipment to repair CVNs and submarines in accordance with the February 2018 Shipyard Infrastructure Optimization Plan Report to Congress contributes to decreasing availability costs and schedules, ultimately returning mission days to the Fleet and moving the needle on Shipyard throughput. KNCA1 captures congressional add funding provided to accelerate shipyard infrastructure optimization. No individual FY21 CA acquisitions exceed $10M for inclusion as discrete cost elements.

[P40A / Industry 4.0 Capabilities Asset Visibility Management]: FY22 Industry 4.0 Capabilities - Asset Visibility Management:
As part of a FY22 SIOP initiative this project implements industry proven asset tracking and material location tools such as radio frequency identification (RFID) and Real-Time Location Services (RTLS) to identify the location of materials, tools, etc. Provides & installs Radio Frequency Identification (RFID)/Real Time Locator Services (RTLS) and the software required to locate items in the NSYs. Improves material visibility, supports auditability, and supports availability execution

[P40A / Industry 4.0 Capabilities Equipment Monitoring Advanced Manufacturing]: FY22 Industry 4.0 Capabilities - Equipment Monitoring and Advanced Manufacturing:

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 14: Production Facilities Equipment	**P-1 Line Item Number / Title:** 1445 / Operating Forces IPE	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

As part of a FY22 SIOP initiative this project implements industry proven solutions to connect equipment for digital manufacturing, increase throughput, quality, report on machine health. Provides HW & upgrades drivers for capable equipment, enabling connectivity to accept data electronically vs punching it in at the terminal or using a thumb drive and report on equipment operating status/machine health. Reduces time to transfer machining directions for components from the design loft to the plant equipment, increases first time quality, repeatability, and equipment health metrics. Current Project Scope: 4 NSYs, 150 pieces of equipment total.

[P40A / KN400: FLEET MAINTENANCE INVESTMENT PROGRAM]: Provides funding to support capital investments for the Regional Maintenance Centers (RMCs), including forward deployed RMCs, Trident Refit Facility (TRF) Kings Bay (KB), Naval Submarine Support Facility New London (NSSF NL), Navy Base Guam and U.S. Naval Ship Repair Facility and Japan Regional Maintenance Center (SRF-JRMC). Funds will be used for the procurement and execution of personal property projects (including Industrial Plant Equipment greater than $250K to maintain and modernize the ship maintenance industrial base).

[P40A / KN800: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) AND ENTERPRISE REMOTE MONITORING (eRM) NEW INSTALL]: Procures all new installations of the Integrated Condition Assessment System (ICAS) and Enterprise Remote Monitoring (eRM) hardware and software aboard Surface Fleet hulls. New Installation include: ICAS/eRM workstation hardware (including Palm Pilot Portable Data Terminal (PDTs)), latest version of ICAS/eRM system software, Configuration Data Set (CDS) (including the implementation of developed enhancements), firewall (if applicable), remote monitoring utility (RMU), ILS and ship's force training. Manage contractor efforts, prepare installation plans, perform ship checks, procure material, oversee shipboard installation and Quality Assurance (QA), develop/implement CDS, install/test all software and CDSs, provide ship's force training.

[P40A / KN900: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) AND ENTERPRISE REMOTE MONITORING (eRM) TECH REFRESH]: Procures all technical refresh upgrades of the Integrated Condition Assessment System (ICAS) and Enterprise Remote Monitoring (eRM) hardware and software aboard Surface Fleet hulls. Upgrades will include: ICAS/eRM workstation hardware (including Palm Pilot Portable Data Terminal (PDTs)), latest version of ICAS/eRM system software, Configuration Data Set (CDS) groom (including the implementation of developed enhancements), firewall (if applicable), remote monitoring utility (RMU), and ship's force refresher training. Manage contractor efforts, prepare installation plans, perform ship checks, procure material, oversee shipboard installation and Quality Assurance (QA), develop/implement CDS updates, install/test all software and CDSs, provide ship's force training.

[P40A / KN975: PACOM PMTEC STUDIES]: Adds funds for Pacific Multi-Domain Training and Experimentation Capability (PMTEC) studies, Wargaming Analysis Capabilities, USINDOPACOM training and exercise network capabilities, PMTEC program management cell, and establishment of Exercise Experimentation Program and Joint Battle Problem. PMTEC is a joint initiative to integrate and improve elements of existing ranges, training areas and test facilities in the Pacific to provide a multi-domain test, training and experimentation capability. This capability will enable USINDOPACOM to strengthen the overall readiness and interoperability of U.S. forces across all domains and to test new warfighting concepts to improve joint force lethality.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 14: Production Facilities Equipment	**P-1 Line Item Number / Title:** 1445 / Operating Forces IPE

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Operating Forces IPE	P-5a, P-21			- / 1,199.456	- / 460.822	- / 174.743	- / 187.495	- / -	- / 187.495
P-40	**Total Gross/Weapon System Cost**				**- / 1,199.456**	**- / 460.822**	**- / 174.743**	**- / 187.495**	**- / 0.000**	**- / 187.495**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The Operating Forces Industrial Plant Equipment (IPE) for the Shipyard Capital Investment Program and NMMES Sustainment budget identify and break out individual component costs for acquisitions over $10M.

FY24 KN300 CIP (SIOP) FY24 funding of $137.282M is required to support capital equipment procurements for the naval shipyards and Fleet I-level maintenance activities. These procurements deliver modern innovative equipment required to support submarine, aircraft carrier, and surface ship maintenance, eliminating reliance on significantly aged and obsolete IPE, weight handling equipment, and nuclear support equipment infrastructure. Examples of projects, but not limited to, include: SIOP Pipe benders, Plasma Cutters, Generators, Crawler Cranes, Mobile Cranes, Bridge Mills.

FY24 KN200 NMMES funding level of $6.510M is required to support the procurement of ERP integration software and associated hardware.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	P-1 Line Item Number / Title: 1445 / Operating Forces IPE	Aggregated Items Title: Operating Forces IPE

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)
1) KN200: NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION SUSTAINMENT																				
1.1) NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION SUSTAINMENT (1)	A		-	-	47.276	-	-	6.807	-	-	6.422	-	-	6.510	-	-	-	-	-	6.510
Subtotal: 1) KN200: NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION SUSTAINMENT			**-**	**-**	***47.276***	**-**	**-**	***6.807***	**-**	**-**	***6.422***	**-**	**-**	***6.510***	**-**	**-**	**-**	**-**	**-**	***6.510***
2) KN201: NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION TECHNICAL REFRESH (NMMES-TR)																				
2.1) NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION TECHNICAL REFRESH	A		1,221.000	1	1.221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) KN201: NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION TECHNICAL REFRESH (NMMES-TR)			**-**	**-**	***1.221***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)																				
3.1) SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP) (2)	A		-	-	840.596	2,138.600	5	10.693	5,609.600	5	28.048	8,728.200	10	87.282	-	-	-	8,728.200	10	87.282
3.2) 175 TON HEAVY LIFT PORTAL CRANE(†)	A		46,750.000	2	93.500	48,000.000	1	48.000	49,000.000	1	49.000	50,000.000	1	50.000	-	-	-	50,000.000	1	50.000
3.3) REACTOR SERVICING COMPLEX (3)(†)	A		-	-	-	48,000.000	1	48.000	48,000.000	1	48.000	-	-	-	-	-	-	-	-	-
3.4) CONGRESSIONAL ADD - BANGOR COMPLEX (4)(†)	A		-	-	-	10,000.000	1	10.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)			**-**	**-**	***934.096***	**-**	**-**	***116.693***	**-**	**-**	***125.048***	**-**	**-**	***137.282***	**-**	**-**	**-**	**-**	**-**	***137.282***
4) KNCA1: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP) CONGRESSIONAL ADD																				
4.1) SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP) CONGRESSIONAL ADD(†)	A		75,000.000	1	75.000	2,750.000	70	192.500	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	P-1 Line Item Number / Title: 1445 / Operating Forces IPE	Aggregated Items Title: Operating Forces IPE

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)
4.2) Civil Engineering Support Equipment (5)(†)	A		-	-	-	11,500.000	2	23.000	-	-	-	-	-	-	-	-	-	-	-	-
4.3) Industry 4.0 Capabilities Asset Visibility Management(†)	A		-	-	-	60,000.000	1	60.000	-	-	-	-	-	-	-	-	-	-	-	-
4.4) Industry 4.0 Capabilities Equipment Monitoring Advanced Manufacturing(†)	A		-	-	-	24,500.000	1	24.500	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) KNCA1: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP) CONGRESSIONAL ADD			**-**	**-**	***75.000***	**-**	**-**	***300.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) KN400: FLEET MAINTENANCE INVESTMENT PROGRAM (6)																				
5.1) FLEET MAINTENANCE INVESTMENT PROGRAM	A		-	-	55.702	-	-	27.199	-	-	29.158	-	-	29.239	-	-	-	-	-	29.239
Subtotal: 5) KN400: FLEET MAINTENANCE INVESTMENT PROGRAM			**-**	**-**	***55.702***	**-**	**-**	***27.199***	**-**	**-**	***29.158***	**-**	**-**	***29.239***	**-**	**-**	**-**	**-**	**-**	***29.239***
6) KN504: SRF-JRMC Capital Investment Program																				
6.1) SRF-JRMC Capital Investment Program	A		10,251.000	1	10.251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) KN504: SRF-JRMC Capital Investment Program			**-**	**-**	***10.251***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
7) KN507: SRF-JRMC Capital Investment Program																				
7.1) SRF-JRMC Capital Investment Program	A		-	-	17.635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) KN507: SRF-JRMC Capital Investment Program			**-**	**-**	***17.635***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
8) KN800: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) AND ENTERPRISE REMOTE MONITORING (eR																				
8.1) INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) AND eRM	A		-	-	26.814	-	-	8.468	-	-	9.599	-	-	9.723	-	-	-	-	-	9.723
Subtotal: 8) KN800: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) AND ENTERPRISE REMOTE MONITORING (eR			**-**	**-**	***26.814***	**-**	**-**	***8.468***	**-**	**-**	***9.599***	**-**	**-**	***9.723***	**-**	**-**	**-**	**-**	**-**	***9.723***
9) KN900: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) AND ENTERPRISE REMOTE MONITORING (eR																				

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	P-1 Line Item Number / Title: 1445 / Operating Forces IPE	Aggregated Items Title: Operating Forces IPE

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)	Unit Cost ($ K)	Qty (Each)	Total Cost ($ M)
9.1) INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) AND eRM	A		-	-	20.661	-	-	1.655	-	-	1.716	-	-	1.738	-	-	-	-	-	1.738
Subtotal: 9) KN900: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) AND ENTERPRISE REMOTE MONITORING (eR			**-**	**-**	***20.661***	**-**	**-**	***1.655***	**-**	**-**	***1.716***	**-**	**-**	***1.738***	**-**	**-**	**-**	**-**	**-**	***1.738***
10) KN970:Information Dominance PACOM																				
10.1) Coronavirus Aid, Relief and Economic Security PACOM	A		-	-	10.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 10) KN970:Information Dominance PACOM			**-**	**-**	***10.800***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
11) KN975: PACOM PMTEC STUDIES																				
11.1) PMTEC Studies (7)	A		-	-	-	-	-	-	-	-	2.800	-	-	3.003	-	-	-	-	-	3.003
Subtotal: 11) KN975: PACOM PMTEC STUDIES			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***2.800***	**-**	**-**	***3.003***	**-**	**-**	**-**	**-**	**-**	***3.003***
Total			**-**	**-**	**1,199.456**	**-**	**-**	**460.822**	**-**	**-**	**174.743**	**-**	**-**	**187.495**	**-**	**-**	**-**	**-**	**-**	**187.495**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(1) Supports procurement of commercial-off-the-shelf (COTS) hardware and software in support of NMMES Financial Tool Upgrades, including Maritime Systems Environment (MSE) and the Electronic Technical Work Document (eTWD) initiative. Provides required development, test, and cybersecurity toolsets; SW/HW required to bring RMCs into eTWD. Provides HW required to deploy mobility solutions assets at maintenance activities with corporate reporting capability. Increase also supports efforts to establish networks for Platform IT devices and relevant industrial equipment to address cybersecurity updates, patches, and SW installation.

(2) There is an increase from FY23 to FY24 SIOP due to the steep rise in inflation of materials. Steel for instance has gone up 50% in the last two years. FY23 includes $8.3M for 688 LA CLASS support that is not considered SIOP.

(3) FY22 and FY23 Reactor Servicing Complex (RSC), previously referred to as the Refueling Complex, allow the Shipyards to support the Fleet's projected need for simultaneous Virginia Class depot level maintenance availabilities and concurrent 688 Class Refuelings. Providing RSCs (FY22 NNSY RSC and FY23 PSNY RSC) at Dry Docks is required to support the Shipyard's mission of submarine overhauls and refuelings into the future. The RSC is a freestanding piece of relocatable equipment that processes spent nuclear fuel. This equipment allows fuel to be safely removed from a submarine and packaged for transportation to a storage facility, via M-140 railcar. The indock equipment performs the reactor servicing operation of processing spent nuclear fuel from the submarine into a shielded container. The indock complex industrial processing equipment includes two support towers, a reactor access enclosure (RAE) bridge, an upper RAE, and passageways leading from the indock complex to the dockside passageway stair tower. The dockside equipment performs the reactor servicing operation of processing spent nuclear fuel from a shielded container into three M-140 railcars. The dockside complex industrial processing equipment typically includes a dockside railcar enclosure, an equipment storage/staging enclosure, a radiological material packaging enclosure, and an enclosed passageway and stair tower leading to the indock complex. Both the dockside complex and indock complex equipment require concrete foundations to safely support equipment operation. The foundations required for the dockside complex do not structurally change existing real property. The foundation is part of the necessary relocatable equipment because of the size, mass and function of the equipment.

(4) FY22 Bangor Complex project will procure, deliver and install relocatable buildings to provide an interim submarine maintenance complex located near the Bangor Service Pier site. The 3 acre complex will support a consolidated workforce of 120+ managers, engineers, and production personnel performing up to two, simultaneous, Intermediate-level CMAVs on the three SEAWOLF Class (SSN21) submarines homeported at Bangor Service Pier starting upon commissioning of the complex. This requirement includes procurement, delivery and installation of 29 modular buildings of various shapes and sizes, industrial enclosures for light production work, fire protection/sprinkler systems serving the clustered modular and enclosure units, lighting, communication systems, information technology systems, electrical, and mechanical connections. Relocatable modulars and enclosures will be placed on existing concrete pads and connected to existing stubbed utility connections.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	**P-1 Line Item Number / Title:** 1445 / Operating Forces IPE	**Aggregated Items Title:** Operating Forces IPE

(5) This list of CESE equipment includes a Rough Terrain Mobile Cranes, 3-Axle Container Chassis, Arial Work Platform, Trailers (Various capacity/configuration), Nitrogen Charging Trailer, Pure Water Trailers, Cask Trailer, emergency Response Equipment, Crawler Cranes and Locomotives

(6) Funds will be used for the procurement and execution of personal property projects (including Industrial Plant Equipment greater than $250K to maintain and modernize the ship maintenance industrial base. SRF-JRMC was realigned to FMIP beginning in FY22.

(7) Funding for PMTEC studies, Wargaming Analysis Capabilities, USINDOPACOM training and exercise network capabilities, PMTEC program management cell, and establishment of Exercise Experimentation Program and Joint Battle Problem.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	P-1 Line Item Number / Title: 1445 / Operating Forces IPE	Aggregated Items: Operating Forces IPE

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3) KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)												
3.2) 175 TON HEAVY LIFT PORTAL CRANE(†)		2020	Konecranes / New Berlin, WI	C / TBD	** NO PCO **	Nov 2019	Nov 2021	1	46,500.000	Y		
3.2) 175 TON HEAVY LIFT PORTAL CRANE(†)		2021	Konecranes / New Berlin, WI	C / TBD	** NO PCO **	Oct 2020	Oct 2022	1	47,000.000	Y		
3.2) 175 TON HEAVY LIFT PORTAL CRANE(†)		2022	Konecranes / New Berlin, WI	C / TBD	** NO PCO **	Oct 2021	Oct 2023	1	48,000.000	Y		
3.2) 175 TON HEAVY LIFT PORTAL CRANE(†)		2023	Konecranes / New Berlin, WI	C / TBD	** NO PCO **	Oct 2022	Oct 2024	1	49,000.000	Y		
3.2) 175 TON HEAVY LIFT PORTAL CRANE(†)		2024	Konecranes / New Berlin, WI	C / TBD	** NO PCO **	Jan 2024	Jan 2026	1	50,000.000	Y		
3.3) REACTOR SERVICING COMPLEX (3)(†)		2022	TBD / TBD	C / TBD	** NO PCO **	Oct 2021	Oct 2021	1	48,000.000	Y		
3.3) REACTOR SERVICING COMPLEX (3)(†)		2023	TBD / TBD	C / TBD	** NO PCO **	Nov 2022	Nov 2022	1	48,000.000	Y		
3.4) CONGRESSIONAL ADD - BANGOR COMPLEX (4)		2022	NAVFAC / NAVFAC	C / TBD	** NO PCO **	Oct 2022	Oct 2022	1	10,000.000	Y		
4) KNCA1: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP) CONGRESSIONAL ADD												
4.1) SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP) CONGRESSIONAL ADD		2022	TBD / TBD	C / TBD	** NO PCO **	Mar 2023	Mar 2023	70	2,750.000	Y		
4.2) Civil Engineering Support Equipment (5)		2022	TBD / TBD	C / TBD	** NO PCO **	Jun 2022	Jun 2022	2	11,500.000	Y		
4.3) Industry 4.0 Capabilities Asset Visibility Management		2022	TBD / TBD	C / TBD	** NO PCO **	Jun 2022	Jun 2022	1	60,000.000	Y		
4.4) Industry 4.0 Capabilities Equipment Monitoring Advanced Manufacturing		2022	TBD / TBD	C / TBD	** NO PCO **	Jun 2023	Jun 2023	1	24,500.000	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14 | **P-1 Line Item Number / Title:** 1445 / Operating Forces IPE | **Aggregated Items:** Operating Forces IPE

Items (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
										Calendar Year 2020												Calendar Year 2021									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3) KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)																															
3.2) 175 TON HEAVY LIFT PORTAL CRANE																															
	8	2020	NAVY	1	0	1		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	8	2021	NAVY	1	0	1													A -	-	-	-	-	-	-	-	-	-	-	-	1
	8	2022	NAVY	1	0	1																									1
	8	2023	NAVY	1	0	1																									1
	8	2024	NAVY	1	0	1																									1
3.3) REACTOR SERVICING COMPLEX (3)																															
	9	2022	NAVY	1	0	1																									1
	9	2023	NAVY	1	0	1																									1
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14 | **P-1 Line Item Number / Title:** 1445 / Operating Forces IPE | **Aggregated Items:** Operating Forces IPE

Items (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3) KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)																															
3.2) 175 TON HEAVY LIFT PORTAL CRANE																															
	8	2020	NAVY	1	0	1	-	1																							0
	8	2021	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	1												0
	8	2022	NAVY	1	0	1	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	8	2023	NAVY	1	0	1													A -	-	-	-	-	-	-	-	-	-	-	-	1
	8	2024	NAVY	1	0	1																									1
3.3) REACTOR SERVICING COMPLEX (3)																															
	9	2022	NAVY	1	0	1	A1																								0
	9	2023	NAVY	1	0	1														A1											0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14 | **P-1 Line Item Number / Title:** 1445 / Operating Forces IPE | **Aggregated Items:** Operating Forces IPE

Items (Units in Each)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
							Calendar Year 2024												Calendar Year 2025												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3) KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)																															
3.2) 175 TON HEAVY LIFT PORTAL CRANE																															
	8	2020	NAVY	1	1	0																									0
	8	2021	NAVY	1	1	0																									0
	8	2022	NAVY	1	0	1	1																								0
	8	2023	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	1												0
	8	2024	NAVY	1	0	1				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
3.3) REACTOR SERVICING COMPLEX [3]																															
	9	2022	NAVY	1	1	0																									0
	9	2023	NAVY	1	1	0																									0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14 | **P-1 Line Item Number / Title:** 1445 / Operating Forces IPE | **Aggregated Items:** Operating Forces IPE

Items (Units in Each)							Fiscal Year 2026												Fiscal Year 2027												BALANCE
							Calendar Year 2026												Calendar Year 2027												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3) KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)																															
3.2) 175 TON HEAVY LIFT PORTAL CRANE																															
	8	2020	NAVY	1	1	0																									0
	8	2021	NAVY	1	1	0																									0
	8	2022	NAVY	1	1	0																									0
	8	2023	NAVY	1	1	0																									0
	8	2024	NAVY	1	0	1	-	-	-	1																					0
3.3) REACTOR SERVICING COMPLEX (3)																															
	9	2022	NAVY	1	1	0																									0
	9	2023	NAVY	1	1	0																									0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	**P-1 Line Item Number / Title:** 1445 / Operating Forces IPE	**Aggregated Items:** Operating Forces IPE

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Konecranes - New Berlin, WI			TBD	12	1	24	25	2	1	24	25
2	TBD - TBD			TBD	2	6	12	18	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 443		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	584.584	63.501	54.883	49.060	0.000	49.060	44.214	37.226	32.276	32.991	360.231	1,258.966
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	584.584	63.501	54.883	49.060	0.000	49.060	44.214	37.226	32.276	32.991	360.231	1,258.966
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**584.584**	**63.501**	**54.883**	**49.060**	**0.000**	**49.060**	**44.214**	**37.226**	**32.276**	**32.991**	**360.231**	**1,258.966**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.195	1.970	3.937	-	3.937	1.677	2.403	1.439	1.703	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Littoral Combat Ship (LCS) focused mission packages provide the operational commander with capabilities to perform Mine Countermeasures (MCM) operations, and a Surface Warfare (SUW) detect-to-engage capability to counter small boat threats. A Mission Package (MP) is a combination of warfare Mission Modules (MM) with specialized crew, support equipment, and vehicles, including embarked manned helicopters, unmanned aircraft and maritime systems. MMs are packaged in a modular fashion so that they can be quickly swapped in and out pier side on any LCS platform.

The Common Mission Modules Equipment line funds the procurement of MCM and SUW MP support containers and equipment that is common across the mission packages (Mission Package Computing Environment (MPCE), Technology Refresh of the Multi-Vehicle Communications System (MVCS), and Training Equipment).

MCM and SUW support containers do not comprise a MP and are deployable only as part of a Mission Module (MM). A MM is deployable and capable of meeting its focused mission requirements on a LCS only when it includes the full complement of Common Mission Modules Equipment combined with all the required mission systems.

Other Related Budgets: BLIs: OPN 1601, OPN 1602, OPN 1603, OPN 4248, OPN 2622, OPN 2624, WPN 4221, WPN 4225, RDT&E 0603596N, SCN 2127

[P40A / LM008 - MPCE]: Commercial Off The Shelf (COTS)- Based Common Computing environment will support legacy Mission Package (MP) Command & Control (C2) applications and transition to Modular Open Systems Approach (MOSA) & Navy Open Architecture Computing Environment (OACE). It also provides a common computing environment to support the execution of Mission Package Application Software (MPAS), the shipboard tactical software associated with each mission package that enables execution of its focused mission. Includes installation and checkout on-board the seaframe. In addition, Mission Package Portable Control Stations (MPPCS) are required to support pre-deployment checkouts, to support shore-based and vessels of opportunity operations of mission packages and off-board vehicles.

[P40A / MPCE 2.0 Ship Sets/Lethality and Survivability]: MPCE 2.0 improves data extraction, data encryption, cybersecurity enhancements, and virtualization capabilities needed for all three Mission Packages (MPs).

[P40A / LM012 - TRAINING EQUIPMENT]: Procurement of LCS Mission Module training systems for LCS crews to learn the safe and effective use of Mission Package equipment (mission systems, support equipment, and support containers). LCS MM Training is planned for several training sites including the LCS Training Facilities (LTFs) in San Diego, CA and Mayport, FL for all MPs; the Surface Combat Systems Training Command (SCSTC) in Dam neck, VA for the SUW MP; SCSTC San Diego for ASW MP; and at the Mine Warfare Training Center (MWTC) in San Diego, CA for the MCM MP.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 443		

The LTFs provide tactical watch team training as well as crew certifications using Common Mission Package Trainers (CMPT) in combination with the Integrated Tactical Trainers (ITTs). The LTFs also provide full scale replications of LCS mission bays where launch, recovery, and handling procedures for LCS MM systems is taught and practiced. LCS MM training covers various functions including operations, maintenance, tactical employment, and hands-on skills to achieve the key performance parameter objective of Train to Qualify and Train to Certify. CMPTs are used to train individuals in a team environment (Train to Qualify) and are also used to certify watch teams (Train to Certify) during off hull periods at LTF.

The LCS Integrated Tactical Trainer (ITT) uses the CMPT for mission package operations. Six CMPTs were procured and delivered from FY11-FY21to support three ITTs at LTF Mayport (LCS-1 configuration) and three ITTs at LTF San Diego (LCS-2 configuration).

Partial MCM and SUW integrated team training exists at LTF San Diego and full SUW and partial MCM capability in Mayport. MCM ITT functions with USV capability was procured in FY 2019 and delivered to each LTF in FY 2021. MCM USV with Mine Hunt and SMCM UUV capability will be procured in FY 2022 for delivery to each LTF in FY 2024.

MCM MP: All unmanned vehicles, sensors, and systems in support containers to demonstrate Launch & Recovery (L&R) and maintenance tasks. Training involves operations, maintenance, tactical employment and physical movement of all unmanned vehicles, sensors, and systems with their associated support containers. Surface Training Advanced Virtual Environment for LCS (STAVE-LCS) (virtual reality) is planned to allow team training LCS
Launch and Recovery of Unmanned Systems (USV and UUV) in FY 2024. Procurements are aligned to meet Fleet training throughput demands.

[P40A / LM015 - CONTAINERS (SHIPPING & SUPPORT)]: Each MP variant uses a base Support Container (SC) which is an International Organization for Standardization (ISO) compliant shipping container, and comes in two variants: Type I and Type II. The Type I container is a 20-foot ISO container with nominal dimensions of 20' x 8' x 8'. The Type II container is a 10-foot ISO container with nominal dimensions of 10' x 8' x 8'. In both cases the base SC is constructed of high strength steel or aluminum to reduce the overall weight and features a number of standard configuration items. Mission systems fit inside standard ten- or twenty-foot ISO SCs, or on ISO compliant flat racks and vehicle cradles. The LCS MP zones inside each seaframe mission bay are configured to accommodate the SCs.

[P40A / MCM SUPPORT CONTAINER]: Unit price for the MCM Support Containers is an average cost that does not reflect the actual cost of each container. Individual containers for each of the different MCM mission systems have unique requirements and vary in cost. Support containers store all the tools, spares, peculiar support equipment (PSE), consumables and personal protection equipment (PPE) required to maintain and operate the MP systems while on LCS deployment.

[P40A / LM016 - MVCS]: The Multiple Vehicle Communications System (MVCS) provides the Littoral Combat Ship (LCS) Mission Modules with the capability to simultaneously communicate with multiple Unmanned Surface Vehicles (USVs) and surfaced Unmanned Undersea Vehicles (UUVs) by providing a common data link and network communication services. These services include link establishment, link management, communications fail-safes, Emissions Control (EMCON) handling, data routing and protection, packet shaping, Priority of Service (PoS), and automated communications system configuration. MVCS establishes a common interface for these services in the form of hardware and message definitions to maximize the usefulness of limited radio equipment onboard the LCS seaframe.

[P40A / LM017 - Mission Module Display Modernization]: The Mission Module Display Modernization mitigates console hardware obsolescence and provides monitor resolution required to support the Mission Package operations.

[P40A / LM900 - CONSULTING SERVICES]: Provides program management support, engineering and technical support, studies, analysis and evaluation on mission package systems.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 443

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	LCS MISSION MODULES	P-5a, P-21			- / 584.584	- / 63.501	- / 54.883	- / 49.060	- / -	- / 49.060
P-40	**Total Gross/Weapon System Cost**				**- / 584.584**	**- / 63.501**	**- / 54.883**	**- / 49.060**	**- / 0.000**	**- / 49.060**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2024 funding in LM008 (MPCE) supports the continued technology refresh of the MPCE. In FY 2024, the program starts the procurement of MPCE 2.0 to address obsolescence, cyber security enhancements, and performance improvements in the MPCE baseline. Also, MPCE 2.0 improves data extraction, data encryption, and virtualization capabilities which reduces the rack space needed for Post Mission Analysis (PMA) for all three Mission Packages (MPs).

LM012 CMPT/MPTS Tech Refresh/Modernization: Funds the technology refresh of four CMPTs at the LCS Training Facilities (LTFs) in San Diego, CA / Mayport, FL. CMPT tech refreshes support the operation of MPCE version 2.0 software requirements.

LM015 support procurement of MCM Support Containers required to outfit LCS MCM Division Ships. Support containers are deployed on the ship with an embarked MP to store spares, tools, support equipment, and consumables required to maintain and operate the mission system and aircraft when deployed.

LM016 (MVCS) supports procurement of MVCS Tech Refresh equipment/approvals to include new Cross Domain Solution hardware to meet National Security Agency (NSA) mandated security requirements.

LM017 (MP Console Obsolescence) The LCS Mission Package Consoles are a common console used by all of the LCS Mission Packages. Current consoles are provided as permanently installed equipment by the LCS seaframe vendor. The seven Mission Package consoles provide an interface for MP sailors to operate the mission package tactical software and conduct MP operations. The current Mission Package consoles are no longer supportable due to lack of available COTS parts. In addition to obsolescence, the tech refresh consoles will provide additional capability required by the MCM MP to conduct post mission analysis, display resolution and CPU processing that the existing consoles do not support. FY24 decrease in funding due to alignment with LCS availability schedules.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment	**Aggregated Items Title:** LCS MISSION MODULES

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) LM001 - MCM Mission Package																				
1.1) USV	A		-	-	1.725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) USV - SWEEP	A		-	-	2.410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) RMMV	A		-	-	17.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) RMMV CRADLE	A		7,604K	2	15.208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) AMNS	A		4,272K	4	17.090	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6) ALMDS	A		6,622K	3	19.867	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.7) AN/AQS-20A	A		8,769K	3	26.307	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.8) COBRA	A		7,792K	1	7.792	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.9) MCM SUPPORT CONTAINERS	A		1,547K	15	23.203	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.10) SUPPORT EQUIPMENT	A		-	-	9.804	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.11) PRODUCTION ENGINEERING SUPPORT	A		-	-	10.153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.12) MCM INCREMENTAL WHOLENESS - AQS-20A	A		5,773K	1	5.773	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) LM001 - MCM Mission Package			**-**	**-**	***156.340***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) LM002 - ASW MISSION PACKAGE																				
2.1) ASW MISSION PACKAGE	A		-	-	17.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) LM002 - ASW MISSION PACKAGE			**-**	**-**	***17.008***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) LM003 - SUW MISSION PACKAGE																				
3.1) GUN MODULE	A		4,206K	6	25.237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) SUW SHIPPING CONTAINER	A		144,833.33	6	0.869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.3) SUW SUPPORT CONTAINER	A		980,250.00	4	3.921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.4) SURFACE-TO-SURFACE MISSILE MODULE	A		-	-	2.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.5) PRODUCTION ENGINEERING	A		-	-	2.013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) LM003 - SUW MISSION PACKAGE			**-**	**-**	***34.440***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) LM005 - OBSOLESENCE MISSION MODULE ECPs																				

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment	Aggregated Items Title: LCS MISSION MODULES

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
4.1) ENGINEERING CHANGE PROPOSALS	A		-	-	22.558	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) LCS MISSION MODULES RADIO	A		1,540K	8	12.316	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.3) PRODUCTION ENGINEERING	A		-	-	1.436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) LM005 - OBSOLESENCE MISSION MODULE ECPs			**-**	**-**	***36.310***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) LM007 - C-HAWKLINK SUPPORT EQUIPMENT																				
5.1) C-HAWKLINK SUPPORT EQUIPMENT	A		-	-	5.885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) LM007 - C-HAWKLINK SUPPORT EQUIPMENT			**-**	**-**	***5.885***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
6) LM008 - MPCE																				
6.1) Mission Package Portable Control Station	A		1,618K	2	3.237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.2) MPPCS Computing Hardware Tech Refresh(†)	A		-	-	-	-	-	-	863,000.00	3	2.589	910,000.00	3	2.730	-	-	-	910,000.00	3	2.730
6.3) MPCE Hardware(†)	A		725,121.21	33	23.929	882,666.67	4	3.531	-	-	-	-	-	-	-	-	-	-	-	-
6.4) MPCE 2.0 Ship Sets/Lethality and Survivability (1)(†)	A		-	-	-	-	-	-	863,000.00	4	3.452	880,260.00	2	1.761	-	-	-	880,260.00	2	1.761
6.5) MPCE Tech Refresh(†)	A		684,275.86	29	19.844	846,000.00	4	3.384	863,000.00	4	3.452	880,260.00	4	3.521	-	-	-	880,260.00	4	3.521
6.6) MPCE Sonar Signal Processing System (SSPS)	A		2,261K	4	9.043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.7) MPCE SSPS Tech Refresh NRE	A		-	-	4.460	-	-	2.281	-	-	-	-	-	-	-	-	-	-	-	-
6.8) PRODUCTION ENGINEERING	A		-	-	3.954	-	-	1.296	-	-	1.468	-	-	1.228	-	-	-	-	-	1.228
Subtotal: 6) LM008 - MPCE			**-**	**-**	***64.467***	**-**	**-**	***10.492***	**-**	**-**	***10.961***	**-**	**-**	***9.240***	**-**	**-**	**-**	**-**	**-**	***9.240***
7) LM009 - DATA MISSION PAYLOAD																				
7.1) DATA MISSION PAYLOAD	A		5,391K	2	10.782	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.2) PRODUCTION ENGINEERING	A		-	-	1.638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) LM009 - DATA MISSION PAYLOAD			**-**	**-**	***12.420***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment	**Aggregated Items Title:** LCS MISSION MODULES

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
8) LM010 - MISSION PACKAGE INTEGRATION																				
8.1) MISSION PACKAGE PRODUCTION ENGINEERING & ASSEMBLY	A		-	-	16.422	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 8) LM010 - MISSION PACKAGE INTEGRATION			**-**	**-**	***16.422***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
9) LM012 - TRAINING EQUIPMENT																				
9.1) COMMON MISSION PACKAGE TRAINER (CMPT)	A		3,468K	5	17.340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.2) CMPT MPTS Tech Refresh/ Modernization (2)	A		-	-	10.307	-	-	4.348	-	-	4.217	-	-	1.661	-	-	-	-	-	1.661
9.3) MISSION PACKAGE TRAINING SYSTEM (MPTS)	A		-	-	0.993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.4) MK-50 GUN WEAPON SYSTEM TTE	A		3,890K	1	3.890	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.5) MISSION BAY TRAINING DEVICES - MCM	A		-	-	36.445	-	-	16.589	-	-	-	-	-	3.951	-	-	-	-	-	3.951
9.6) MISSION BAY TRAINING DEVICES - MCM Support Containers	A		-	-	2.797	-	-	1.906	-	-	-	-	-	-	-	-	-	-	-	-
9.7) MISSION BAY TRAINING DEVICES - SUW	A		-	-	0.912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 9) LM012 - TRAINING EQUIPMENT			**-**	**-**	***72.684***	**-**	**-**	***22.843***	**-**	**-**	***4.217***	**-**	**-**	***5.612***	**-**	**-**	**-**	**-**	**-**	***5.612***
10) LM013 - MARITIME SECURITY MODULE																				
10.1) MARITIME SECURITY MODULE	A		7,701K	2	15.402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.2) PRODUCTION ENGINEERING	A		-	-	1.279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 10) LM013 - MARITIME SECURITY MODULE			**-**	**-**	***16.681***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
11) LM015 - CONTAINERS (SHIPPING & SUPPORT)																				
11.1) MCM SUPPORT CONTAINER(†)	A		1,485K	46	68.319	1,658K	13	21.558	1,754K	9	15.787	1,694K	8	13.552	-	-	-	1,694K	8	13.552

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment	**Aggregated Items Title:** LCS MISSION MODULES

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
11.2) SUW SUPPORT CONTAINER	A		474,434.78	46	21.824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.3) SUW SHIPPING CONTAINER	A		178,875.00	24	4.293	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.4) PRODUCTION ENGINEERING	A		-	-	22.595	-	-	0.889	-	-	1.695	-	-	1.605	-	-	-	-	-	1.605
Subtotal: 11) LM015 - CONTAINERS (SHIPPING & SUPPORT)			**-**	**-**	***117.031***	**-**	**-**	***22.447***	**-**	**-**	***17.482***	**-**	**-**	***15.157***	**-**	**-**	**-**	**-**	**-**	***15.157***
12) LM016 - MVCS																				
12.1) Cyber Resilience	A		-	-	2.818	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.2) MVCS Tech Refresh (3)	A		-	-	16.203	-	-	4.661	-	-	4.448	-	-	5.479	-	-	-	-	-	5.479
12.3) Production Engineering	A		-	-	2.270	-	-	0.712	-	-	0.820	-	-	0.805	-	-	-	-	-	0.805
Subtotal: 12) LM016 - MVCS			**-**	**-**	***21.291***	**-**	**-**	***5.373***	**-**	**-**	***5.268***	**-**	**-**	***6.284***	**-**	**-**	**-**	**-**	**-**	***6.284***
13) LM017 - Mission Module Display Modernization																				
13.1) Mission Module Display Modernization (4)(†)	A		-	-	-	-	-	1.967	2,310K	7	16.170	2,356K	5	11.781	-	-	-	2,356K	5	11.781
13.2) Production Engineering	A		-	-	-	-	-	-	-	-	0.391	-	-	0.563	-	-	-	-	-	0.563
Subtotal: 13) LM017 - Mission Module Display Modernization			**-**	**-**	***0.000***	**-**	**-**	***1.967***	**-**	**-**	***16.561***	**-**	**-**	***12.344***	**-**	**-**	**-**	**-**	**-**	***12.344***
14) LM900 - CONSULTING SERVICES																				
14.1) CONSULTING SERVICES	A		-	-	13.605	-	-	0.379	-	-	0.394	-	-	0.423	-	-	-	-	-	0.423
Subtotal: 14) LM900 - CONSULTING SERVICES			**-**	**-**	***13.605***	**-**	**-**	***0.379***	**-**	**-**	***0.394***	**-**	**-**	***0.423***	**-**	**-**	**-**	**-**	**-**	***0.423***
Total			**-**	**-**	**584.584**	**-**	**-**	**63.501**	**-**	**-**	**54.883**	**-**	**-**	**49.060**	**-**	**-**	**-**	**-**	**-**	**49.060**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(1) MPCE 2.0 is required to support planned LCS Lethality and Survivability updates. Funding supports procurement of MPCE to remain in alignment with these updates and ensure future compatibility between LCS combat system and mission modules.

(2) Procure CMPT tech refresh for phased maintenance updates in alignment with Fleet configuration changes for installation and check-out with lethality and survivability upgrades to LCS Integrated Tactical Trainers at each LTF learning site.

(3) Cost and scope of MVCS Tech Refreshes varies each year based on the condition of the units that are being refreshed, as well as the components needed for each tech refresh kit due to different MVCS baselines and equipment (shipboard, lab, radios, etc.).

(4) Mission Module Display Modernization quantities and unit costs represent per shipset (7 consoles per shipset).

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment	Aggregated Items: LCS MISSION MODULES

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
6) LM008 - MPCE												
6.2) MPPCS Computing Hardware Tech Refresh		2023	Advance Acoustic Concept / New MFG - Loc	SS / FFP	NAVSEA	Jan 2023	Jan 2024	3	863,000.00	Y		
6.3) MPCE Hardware		2022	Advanced Acoustic Concept / Columbia, MD	SS / FFP	NAVSEA	Mar 2022	Mar 2023	4	882,666.67	Y		
6.4) MPCE 2.0 Ship Sets/Lethality and Survivability (1)		2023	Advanced Acoustic Concept / Columbia, MD	SS / FFP	NAVSEA	Jan 2023	Jan 2024	4	863,000.00	Y		
6.5) MPCE Tech Refresh		2022	Advanced Acoustic Concept / Columbia, MD	SS / FFP	NAVSEA	Mar 2022	Mar 2023	4	846,000.00	Y		
6.5) MPCE Tech Refresh		2023	Advanced Acoustic Concept / Columbia, MD	SS / FFP	NAVSEA	Feb 2023	Feb 2024	4	863,000.00	Y		
6.5) MPCE Tech Refresh		2024	Advanced Acoustic Concept / Columbia, MD	C / TBD	** NO PCO **	Oct 2023	Oct 2024	4	880,260.00	Y		
11) LM015 - CONTAINERS (SHIPPING & SUPPORT)												
11.1) MCM SUPPORT CONTAINER(†)		2021	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / FFP	NAVSEA	Mar 2021	Sep 2022	8	1,682K	Y		
11.1) MCM SUPPORT CONTAINER(†)		2022	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / FFP	NAVSEA	Mar 2022	Sep 2023	13	1,658K	Y		
11.1) MCM SUPPORT CONTAINER(†)		2023	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	SS / FFP	NAVSEA	Mar 2023	Sep 2024	9	1,754K	Y		
13) LM017 - Mission Module Display Modernization												
13.1) Mission Module Display Modernization (4)		2023	NSWC PHD / Port Hueneme, CA	WR	** NO PCO **	Oct 2022	Oct 2023	7	2,310K	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment	**Aggregated Items:** LCS MISSION MODULES

Items (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
11) LM015 - CONTAINERS (SHIPPING & SUPPORT)																															
11.1) MCM SUPPORT CONTAINER																															
Prior Years Deliveries: 38																															
	10	2021	NAVY	8	0	8						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	3
	10	2022	NAVY	13	0	13																		A -	-	-	-	-	-	-	13
	10	2023	NAVY	9	0	9																									9
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment	**Aggregated Items:** LCS MISSION MODULES

Items (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
										Calendar Year 2023												Calendar Year 2024									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
11) LM015 - CONTAINERS (SHIPPING & SUPPORT)																															
11.1) MCM SUPPORT CONTAINER																															
Prior Years Deliveries: 38																															
	10	2021	NAVY	8	5	3	3																								0
	10	2022	NAVY	13	0	13	-	-	-	-	-	-	-	-	-	-	-	5	3	3	2										0
	10	2023	NAVY	9	0	9						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	4
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment	**Aggregated Items:** LCS MISSION MODULES

Items (Units in Each)							Fiscal Year 2025												Fiscal Year 2026												BALANCE
										Calendar Year 2025												Calendar Year 2026									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
11) LM015 - CONTAINERS (SHIPPING & SUPPORT)																															
11.1) MCM SUPPORT CONTAINER																															
Prior Years Deliveries: 38																															
	10	2021	NAVY	8	8	0																									0
	10	2022	NAVY	13	13	0																									0
	10	2023	NAVY	9	5	4	3	1																							0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment	**Aggregated Items:** LCS MISSION MODULES

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	NORTHROP GRUMMAN - BETHPAGE, NEW YORK	1	7	20	3	3	18	21	3	3	18	21

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1601 / LCS MCM Mission Modules

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603596N

Line Item MDAP/MAIS Code: 000

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	591.912	30.119	92.495	93.961	0.000	93.961	122.654	103.972	59.906	61.344	1,024.783	2,181.146
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	591.912	30.119	92.495	93.961	0.000	93.961	122.654	103.972	59.906	61.344	1,024.783	2,181.146
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**591.912**	**30.119**	**92.495**	**93.961**	**0.000**	**93.961**	**122.654**	**103.972**	**59.906**	**61.344**	**1,024.783**	**2,181.146**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	12.154	6.094	3.341	-	3.341	1.504	0.550	1.063	1.105	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Littoral Combat Ship (LCS) Mine Countermeasures (MCM) Mission Package (MP) counters bottom, tethered, near surface, and surface mines in the littorals without putting Sailors in the minefield. When the MCM MP is embarked, LCS is capable of conducting detect-to-engage operations (hunting, sweeping, and neutralization) against shallow and deep-water sea mine threats. The MCM MP provides these capabilities through the use of sensors and weapons deployed from an embarked MH-60S multi-mission helicopter and unmanned offboard vehicles. MCM MP will achieve Initial Operational Capability in Q2FY23.

The embarked MH-60S employs the Organic Airborne Mine Countermeasures (OAMCM) systems to provide rapid and long range airborne detection and neutralization to clear operations in littoral zones, confined straits, choke points, and the Amphibious Operations Area (AOA) quickly. The Airborne Mine Neutralization (AMN) Module (MH-60S Helo + Airborne Mine Neutralization System) and Near Surface Detection (NSD) Module (MH-60S Helo + Airborne Laser Mine Detection System) achieved Initial Operational Capability (IOC) in FY 2017.

The Coastal Mine Reconnaissance (CMR) Module (VTUAV + Coastal Battlefield Reconnaissance and Analysis system COBRA)) Block I achieved IOC and provides the capability to detect mines in the surface zone and beach zone areas, providing the Joint Force Commander with the information needed to clear mines with non-LCS assets and allow military forces to safely and effectively storm the beaches.

The Unmanned Minesweeping (UMS) Module is composed of the MCM Unmanned Surface Vehicle (USV) and Minesweeping Payload Delivery System (PDS) for high speed-influence minesweeping. The MCM USV and Minesweeping PDS was previously known as Unmanned Influence Sweeping System (UISS) which achieved Milestone C and is currently in Low Rate Initial Production (LRIP). The Remote Minehunting (RMH) Module (MCM USV with Minehunting PDS and AN/AQS-20C) detects and identifies bottom and tethered mines. In FY 2020, the MCM USV established a mature Technical Data Package (TDP) and was used for the award of the Production contract in FY2022. The Unmanned Influence Sweep System (UISS) TDP is mature and is being leveraged to procure Minesweeping PDS in FY 2023 under the Multiple Award Contracts (MAC) Indefinite Delivery Indefinite Quantity (IDIQ) USV Family of Systems Contract. In FY 2022, the Minehunting PDS will be procured via a sole source delivery order on the Raytheon IDIQ contract. A follow-on competitive production contract will be awarded for future Mnehunting PDS procurements in FY 2024.

The Buried Minehunting (BMH) Module (Knifefish Unmanned Undersea Vehicle) detects and identifies buried mines and mines in a high clutter environment. Knifefish achieved Milestone C in FY 2019 and is currently in LRIP. The Navy is executing transition from a Block 0 to Block 1 capability. In FY 2021, Knifefish awarded a Block 1 retrofit contract that will establish a mature TDP in preparation for its production contract, and upgrade Block 0 LRIPs to Block 1. The Navy will conduct a limited validation of these capabilities during system acceptance testing and sell off to the government in Q1-Q2FY24. Upon delivery of these systems to the Navy, they will be available for limited Fleet operations.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1601 / LCS MCM Mission Modules	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0603596N
Line Item MDAP/MAIS Code: 000		

The MCM MP system procurements in this BLI are critical to deliver MCM MPs with the capability of the full detect-to-neutralize sequence and replace legacy MCM platforms.

The MCM MP is deployable and capable of meeting its focused mission requirements on an LCS only when it includes the full complement of Common Mission Modules Equipment (Line Item Number 1600) and the full complement of mission systems that comprise each MCM Mission Package (Line Item Number 1601).

Other Related Budgets: BLIs: OPN 1600, OPN 1602, OPN 1603, OPN 1611, OPN 4248, OPN 2622, OPN 2624, WPN 4221, WPN 4225, RDT&E 0603596N, RDT&E 0604028N, RDT&E 0604127N, RDT&E 0603502N, RDT&E 0604127N

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1601 / LCS MCM Mission Modules	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0603596N
Line Item MDAP/MAIS Code: 000		

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-5	1 / LCS MCM Mission Packages	P-5a, P-21			- / 591.912	- / 30.119	- / 92.495	- / 93.961	- / 0.000	- / 93.961
P-40	**Total Gross/Weapon System Cost**				**- / 591.912**	**- / 30.119**	**- / 92.495**	**- / 93.961**	**- / 0.000**	**- / 93.961**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2024 funding includes the following mission systems and associated MP support equipment:

In FY 2024 the program will procure six AN/SLW-2 Unmanned Surface Vehicle (USV), three Minesweeping PDS, six Electromagnetic Sweep Cables, three Minehunting PDS and will procure MCM MP support equipment. Additionally, the program will implement Engineering Change Proposals (ECPs) on procured production MCM USVs and perform tech refreshes to address AQS-20C obsolescence. ECP will also be implemented on both PDS's. The support equipment includes; USV redesigned Surface Tow Cradles (STC-Rs), USV Stowage Cradles, LCS PMA Table Fixture Devices (TFD), and Peculiar Support Equipment (PSE) kit for USV and UISS.

All MCM assets procured in FY 2024 support MCM Division Ship deployments starting in FY 2025. FY 2024 system procurements include the limiting factors required to deliver MCM MPs with the full complement of systems needed to perform the detect-to-neutralize sequence. These systems are critical to complete delivery of MPs to replace legacy MCM platforms.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	591.912	30.119	92.495	93.961	0.000	93.961
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	591.912	30.119	92.495	93.961	0.000	93.961
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**591.912**	**30.119**	**92.495**	**93.961**	**0.000**	**93.961**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	12.154	6.094	3.341	-	3.341
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Hardware - MC001 - UNMANNED MINESWEEPING (UMS) MODULE Cost																		
Recurring Cost																		
1.1.1) Minesweeping Payload Delivery System (including the MK 104 payload)	2,224K	4	8.896	-	-	-	-	-	-	2,393K	3	7.179	-	-	-	2,393K	3	7.179
1.1.2) Electromagnetic Sweep Cables(†)	-	-	-	-	-	-	1,375K	4	5.500	1,416K	6	8.498	-	-	-	1,416K	6	8.498
Subtotal: Recurring Cost	-	-	*8.896*	-	-	-	-	-	*5.500*	-	-	*15.677*	-	-	-	-	-	*15.677*
Subtotal: Hardware - MC001 - UNMANNED MINESWEEPING (UMS) MODULE Cost	**-**	**-**	***8.896***	**-**	**-**	**-**	**-**	**-**	***5.500***	**-**	**-**	***15.677***	**-**	**-**	**-**	**-**	**-**	***15.677***
Hardware - MC002 - MCM UNMANNED SURFACE VEHICLES Cost																		
Recurring Cost																		
2.1.1) AN/SLW-2 Unmanned Surface Vehicle(†) (1)	9,818K	7	68.729	-	-	-	6,500K	4	26.000	5,950K	6	35.700	-	-	-	5,950K	6	35.700
2.1.2) MCM USV ECPs	-	-	13.505	-	-	-	-	-	12.711	-	-	1.751	-	-	-	-	-	1.751
2.1.3) Cyber Security Upgrades	-	-	6.965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.4) MCM USV Production ECP NRE	-	-	10.349	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.5) TBEC ECPs (2)	-	-	-	-	-	-	-	-	2.200	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Subtotal: Recurring Cost	-	-	*99.548*	-	-	-	-	-	*40.911*	-	-	*37.451*	-	-	-	-	-	*37.451*
Subtotal: Hardware - MC002 - MCM UNMANNED SURFACE VEHICLES Cost	**-**	**-**	***99.548***	**-**	**-**	**-**	**-**	**-**	***40.911***	**-**	**-**	***37.451***	**-**	**-**	**-**	**-**	**-**	***37.451***
Hardware - MC003 - ORGANIC AIRBORNE MINE COUNTERMEASURES (OAMCM) SYSTEMS Cost																		
Recurring Cost																		
3.1.1) AN/ASQ-235 Airborne Mine Neutralization System(†)	4,266K	14	59.717	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1.2) AN/AES-1 Airborne Laser Mine Detection System	10,638K	8	85.107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1.3) AN/ASQ-235 AMNS Technology Refresh and Obsolescence Upgrades (3)	-	-	8.976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1.4) AN/AES-1 ALMDS Technology Refresh and Obsolescence Upgrades	-	-	7.986	-	-	2.600	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*161.786*	-	-	*2.600*	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - MC003 - ORGANIC AIRBORNE MINE COUNTERMEASURES (OAMCM) SYSTEMS Cost	**-**	**-**	***161.786***	**-**	**-**	***2.600***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hardware - MC004 - COASTAL MINE RECONNAISANCE MODULE Cost																		
Recurring Cost																		
4.1.1) AN/DVS-1 Coastal Battlefield Reconnaissance and Analysis	8,441K	4	33.764	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*33.764*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - MC004 - COASTAL MINE RECONNAISANCE MODULE Cost	**-**	**-**	***33.764***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hardware - MC005 - BURIED MINEHUNTING MODULE Cost																		
Recurring Cost																		

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
5.1.1) KNIFEFISH	7,302K	2	14.604	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.2) Knifefish Retrofit Kits(†)	4,791K	5	23.954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.3) Knifefish Production NRE (4)	-	-	6.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.4) Knifefish ECP (5)	-	-	-	-	-	-	-	-	10.920	-	-	-	-	-	-	-	-	-
5.1.5) Ancillary Equipment and Container Outfitting (6)	4,198K	2	8.396	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.6) Steel BOA (replacement in kind)	-	-	4.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*58.254*	-	-	-	-	-	*10.920*	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - MC005 - BURIED MINEHUNTING MODULE Cost	**-**	**-**	***58.254***	**-**	**-**	**-**	**-**	**-**	***10.920***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hardware - MC006 - MCM SUPPORT EQUIPMENT Cost																		
Recurring Cost																		
6.1.1) SUPPORT EQUIPMENT	-	-	26.578	-	-	6.478	-	-	18.256	-	-	16.381	-	-	-	-	-	16.381
Subtotal: Recurring Cost	-	-	*26.578*	-	-	*6.478*	-	-	*18.256*	-	-	*16.381*	-	-	-	-	-	*16.381*
Subtotal: Hardware - MC006 - MCM SUPPORT EQUIPMENT Cost	**-**	**-**	***26.578***	**-**	**-**	***6.478***	**-**	**-**	***18.256***	**-**	**-**	***16.381***	**-**	**-**	**-**	**-**	**-**	***16.381***
Hardware - MC008 - REMOTE MINEHUNTING MODULE Cost																		
Recurring Cost																		
7.1.1) Minehunting Payload Delivery System(†)	7,754K	3	23.262	3,800K	3	11.400	3,876K	2	7.752	3,954K	3	11.862	-	-	-	3,954K	3	11.862
7.1.2) AN/AQS-20C	6,660K	10	66.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.1.3) AQS-20C Upgrades(†)	5,887K	10	58.867	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.1.4) AQS-20C Upgrade NRE	-	-	7.632	-	-	4.807	-	-	-	-	-	-	-	-	-	-	-	-
7.1.5) AQS-20C Obsolescence/ Technology Refresh	-	-	-	-	-	-	-	-	-	-	-	4.283	-	-	-	-	-	4.283
Subtotal: Recurring Cost	-	-	*156.361*	-	-	*16.207*	-	-	*7.752*	-	-	*16.145*	-	-	-	-	-	*16.145*

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Subtotal: Hardware - MC008 - REMOTE MINEHUNTING MODULE Cost	**-**	**-**	***156.361***	**-**	**-**	***16.207***	**-**	**-**	***7.752***	**-**	**-**	***16.145***	**-**	**-**	**-**	**-**	**-**	***16.145***
Support - MC900 - CONSULTING SERVICES Cost																		
8.1) CONSULTING SERVICES	-	-	11.454	-	-	2.118	-	-	2.493	-	-	2.568	-	-	-	-	-	2.568
Subtotal: Support - MC900 - CONSULTING SERVICES Cost	**-**	**-**	***11.454***	**-**	**-**	***2.118***	**-**	**-**	***2.493***	**-**	**-**	***2.568***	**-**	**-**	**-**	**-**	**-**	***2.568***
Support - PRODUCTION ENGINEERING Cost																		
9.1) MC001 - UNMANNED INFLUENCE MINE SWEEP	-	-	1.275	-	-	0.118	-	-	0.120	-	-	0.599	-	-	-	-	-	0.599
9.2) MC002 - MCM UNMANNED SURFACE VEHICLE (USV)	-	-	0.960	-	-	-	-	-	1.289	-	-	1.367	-	-	-	-	-	1.367
9.3) MC003 - ORGANIC AIRBORNE MINE COUNTERMEASURES (OAMCM)	-	-	18.781	-	-	-	-	-	1.952	-	-	2.010	-	-	-	-	-	2.010
9.4) MC004 - COASTAL MINE RECONNAISANCE MODULE	-	-	2.265	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.5) MC005 - BURIED MINEHUNTING MODULE	-	-	1.789	-	-	0.906	-	-	1.576	-	-	-	-	-	-	-	-	-
9.6) MC006 - MCM SUPPORT EQUIPMENT	-	-	5.631	-	-	0.791	-	-	0.806	-	-	0.825	-	-	-	-	-	0.825
9.7) MC008 REMOTE MINEHUNTING MODULE	-	-	4.570	-	-	0.901	-	-	0.920	-	-	0.938	-	-	-	-	-	0.938
Subtotal: Support - PRODUCTION ENGINEERING Cost	**-**	**-**	***35.271***	**-**	**-**	***2.716***	**-**	**-**	***6.663***	**-**	**-**	***5.739***	**-**	**-**	**-**	**-**	**-**	***5.739***
Gross/Weapon System Cost	**-**	**-**	**591.912**	**-**	**-**	**30.119**	**-**	**-**	**92.495**	**-**	**-**	**93.961**	**-**	**-**	**0.000**	**-**	**-**	**93.961**

Remarks:
[Hardware] MC001 - The Unmanned Minesweeping Module provides an unmanned surface, long endurance bottom sweep capability to clear large areas of mines that may remain after minehunting operations are complete or in areas of operation where minehunting is less feasible. The UMS Module cost element funds the procurement of the Minesweeping Payload Delivery System to include the magnetic sweep cable and acoustic MK-104 payload. The USVs are procured in the MC002 USVs cost element.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

[Hardware] MC002 - There are two USVs per MCM MP which will be reconfigurable for sweep, hunt, and eventually neutralization missions. Four MCM USVs have been procured as Low Rate Initial Production (LRIP) units on the UISS contract. The program is incorporating engineering changes proposals (ECPs) kits to upgrade all previously procured UISS assets to the common configuration (enables sweep, hunt, and neutralization). In April 0f 2022, the program awarded a competitively sought contract to procure MCM USVs in the common configuration. All future procurements will be the common configuration.

[Hardware] MC005 - The Buried Minehunting Module provides capability to detect and identify buried mines and mines in a cluttered ocean bottom environment. This procurement line supports the LCS mine countermeasures mission package, providing deployable combat capability to the LCS MCM squadron.

[Hardware] MC006 - MCM SUPPORT EQUIPMENT]: Support equipment related to the individual modules and in support of the overall Mission Package.

[Hardware] MC008 - The Remote Minehunting (RMH) Module consists of an Unmanned Surface Vehicle and a Minehunting Payload Delivery System (PDS) for deploying and retrieving the AN/AQS-20 minehunting sonar. The RMH Module cost element funds the procurement of the Minehunting PDS and AN/AQS-20 minehunting sonar payloads. The USVs are procured in the MC002 - USVs cost element.

[Support Cost] MC900 - Provides program management support, engineering and technical support, studies, analysis and evaluation on mission module systems.

[Support Cost] Production Engineering is required in all years of procurement as well as 15-24 months after procurement to support continuing production efforts and fund acceptance testing in year of delivery.

(†) indicates the presence of a P-5a

Footnotes:

(1) FY 2022 contract awarded, but production delayed from April to August due to contract protest.

(2) FY23 Congressional plus up in support of procuring of TBEC long lead items and completing two ship alt on LCS's

(3) AMNS Tech Refreshes improve reliability and maintainability to previously procured AMNS units and correct deficiencies that allow the equipment to perform in accordance with current deployment configuration / operational requirements.

(4) Prior Year Knifefish Production Non-Recurring Engineering (NRE) funds efforts on the Block 1 Retrofit Contract. This funding is captured in prior years due to a cost avoidance realized by descoping the Block 0 production effort (LRIP systems 3 through 5 [FY19 funding]). Descoped funding is being applied to Block 1 Retrofit contract.

(5) FY 2023 funding will complete incorporation of Knifefish Block 1 Engineering Change Proposes (ECPs) onto the Block 0 LRIP systems.

(6) The unit cost includes all necessary equipment to outfit the Buried Minehunting (BMH) Module to include the base pallet, launch and recovery device, shipping containers, support equipment (deck tie down case, ballast transport case, grapple assembly, winch case, and other tools), and the BMH Specialized Container.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) Electromagnetic Sweep Cables(†)		2023	New Contract (TBD) / TBD	C / TBD	** NO PCO **	Jul 2023	Jul 2024	4	1,375K	Y		
1.1.2) Electromagnetic Sweep Cables		2024	New Contract (TBD) / TBD	C / TBD	** NO PCO **	Oct 2023	Oct 2024	6	1,416K	Y		
2.1.1) AN/SLW-2 Unmanned Surface Vehicle(†)		2021	Bollinger Shipyards / Lockport, LA	C / FPIF	NAVSEA	Apr 2022	Apr 2024	3	10,246K	Y		
2.1.1) AN/SLW-2 Unmanned Surface Vehicle(†)		2023	Bollinger Shipyards / Lockport, LA	C / FFP	NAVSEA	Jun 2023	Jun 2025	4	6,500K	Y		
2.1.1) AN/SLW-2 Unmanned Surface Vehicle(†)		2024	Bollinger Shipyards / Lockport, LA	C / FFP	NAVSEA	Dec 2023	Dec 2025	6	5,950K	Y		
3.1.1) AN/ASQ-235 Airborne Mine Neutralization System(†)		2021	Raytheon / Portsmouth, RI	C / FFP	NAVSEA	Aug 2021	Sep 2023	4	3,726K	Y		
5.1.2) Knifefish Retrofit Kits(†)		2021	General Dynamics MS / Mcleansville, NC	C / FPIF	NAVSEA	May 2021	Oct 2023	5	4,791K	Y		
7.1.1) Minehunting Payload Delivery System(†)		2022	Raytheon / Portmouth, RI	SS / IDIQ	NAVSEA	May 2022	May 2023	3	3,800K	Y		
7.1.1) Minehunting Payload Delivery System(†)		2023	TBD / TBD	C / IDIQ	NAVSEA	May 2023	May 2024	2	3,876K	Y		
7.1.3) AQS-20C Upgrades(†)		2020	Raytheon / Portsmouth, RI	SS / FFP	NAVSEA	Mar 2021	May 2024	3	5,887K	Y		
7.1.3) AQS-20C Upgrades(†)		2021	Raytheon / Portsmouth, RI	SS / FFP	NAVSEA	Mar 2021	Aug 2024	7	5,887K	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 | **P-1 Line Item Number / Title:** 1601 / LCS MCM Mission Modules | **Item Number / Title [DODIC]:** 1 / LCS MCM Mission Packages

Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
							Calendar Year 2021												Calendar Year 2022												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) Electromagnetic Sweep Cables																															
	1	2023	NAVY	4	0	4																									4
2.1.1) AN/SLW-2 Unmanned Surface Vehicle (1)																															
Prior Years Deliveries: 4																															
	2	2021	NAVY	3	0	3																			A -	-	-	-	-	-	3
	2	2023	NAVY	4	0	4																									4
	2	2024	NAVY	6	0	6																									6
3.1.1) AN/ASQ-235 Airborne Mine Neutralization System																															
Prior Years Deliveries: 10																															
	3	2021	NAVY	4	0	4											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	4
5.1.2) Knifefish Retrofit Kits																															
	4	2021	NAVY	5	0	5								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
7.1.1) Minehunting Payload Delivery System																															
Prior Years Deliveries: 3																															
	6	2022	NAVY	3	0	3																				A -	-	-	-	-	3
	5	2023	NAVY	2	0	2																									2
7.1.3) AQS-20C Upgrades																															
	7	2020	NAVY	3	0	3						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	7	2021	NAVY	7	0	7						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 | **P-1 Line Item Number / Title:** 1601 / LCS MCM Mission Modules | **Item Number / Title [DODIC]:** 1 / LCS MCM Mission Packages

Cost Elements (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
							Calendar Year 2023												Calendar Year 2024												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) Electromagnetic Sweep Cables																															
	1	2023	NAVY	4	0	4										A -	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1
2.1.1) AN/SLW-2 Unmanned Surface Vehicle (1)																															
Prior Years Deliveries: 4																															
	2	2021	NAVY	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1		0
	2	2023	NAVY	4	0	4									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
	2	2024	NAVY	6	0	6															A -	-	-	-	-	-	-	-	-	-	6
3.1.1) AN/ASQ-235 Airborne Mine Neutralization System																															
Prior Years Deliveries: 10																															
	3	2021	NAVY	4	0	4	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1										0
5.1.2) Knifefish Retrofit Kits																															
	4	2021	NAVY	5	0	5	-	-	-	-	-	-	-	-	-	-	-	-	5												0
7.1.1) Minehunting Payload Delivery System																															
Prior Years Deliveries: 3																															
	6	2022	NAVY	3	0	3	-	-	-	-	-	-	-	3																	0
	5	2023	NAVY	2	0	2								A -	-	-	-	-	-	-	-	-	-	-	-	2					0
7.1.3) AQS-20C Upgrades																															
	7	2020	NAVY	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3					0
	7	2021	NAVY	7	0	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7		0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 | **P-1 Line Item Number / Title:** 1601 / LCS MCM Mission Modules | **Item Number / Title [DODIC]:** 1 / LCS MCM Mission Packages

Cost Elements (Units in Each)							Fiscal Year 2025												Fiscal Year 2026												BALANCE
							Calendar Year 2025												Calendar Year 2026												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) Electromagnetic Sweep Cables																															
	1	2023	NAVY	4	3	1	1																								0
2.1.1) AN/SLW-2 Unmanned Surface Vehicle [1]																															
Prior Years Deliveries: 4																															
	2	2021	NAVY	3	3	0																									0
	2	2023	NAVY	4	0	4	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1										0
	2	2024	NAVY	6	0	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	1
3.1.1) AN/ASQ-235 Airborne Mine Neutralization System																															
Prior Years Deliveries: 10																															
	3	2021	NAVY	4	4	0																									0
5.1.2) Knifefish Retrofit Kits																															
	4	2021	NAVY	5	5	0																									0
7.1.1) Minehunting Payload Delivery System																															
Prior Years Deliveries: 3																															
	6	2022	NAVY	3	3	0																									0
	5	2023	NAVY	2	2	0																									0
7.1.3) AQS-20C Upgrades																															
	7	2020	NAVY	3	3	0																									0
	7	2021	NAVY	7	7	0																									0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1601 / LCS MCM Mission Modules	**Item Number / Title [DODIC]:** 1 / LCS MCM Mission Packages

Cost Elements (Units in Each)							Fiscal Year 2027												Fiscal Year 2028												BALANCE
										Calendar Year 2027												Calendar Year 2028									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2026	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) Electromagnetic Sweep Cables																															
	1	2023	NAVY	4	4	0																									0
2.1.1) AN/SLW-2 Unmanned Surface Vehicle [1]																															
Prior Years Deliveries: 4																															
	2	2021	NAVY	3	3	0																									0
	2	2023	NAVY	4	4	0																									0
	2	2024	NAVY	6	5	1	1																								0
3.1.1) AN/ASQ-235 Airborne Mine Neutralization System																															
Prior Years Deliveries: 10																															
	3	2021	NAVY	4	4	0																									0
5.1.2) Knifefish Retrofit Kits																															
	4	2021	NAVY	5	5	0																									0
7.1.1) Minehunting Payload Delivery System																															
Prior Years Deliveries: 3																															
	6	2022	NAVY	3	3	0																									0
	5	2023	NAVY	2	2	0																									0
7.1.3) AQS-20C Upgrades																															
	7	2020	NAVY	3	3	0																									0
	7	2021	NAVY	7	7	0																									0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1601 / LCS MCM Mission Modules	**Item Number / Title [DODIC]:** 1 / LCS MCM Mission Packages

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	New Contract (TBD) - TBD	2	4	8	0	0	12	12	0	0	12	12
2	Bollinger Shipyards - Lockport, LA	1	6	10	3	0	24	24	0	0	24	24
3	Raytheon - Portsmouth, RI	2	3	8	3	0	25	25	3	3	25	28
4	General Dynamics MS - Mcleansville, NC	1	6	10	3	6	29	35	0	3	24	27
5	TBD - TBD	1	6	10	3	0	15	15	0	0	12	12
6	Raytheon - Portmouth, RI	1	6	10	3	0	15	15	0	0	12	12
7	Raytheon - Portsmouth, RI	2	3	8	3	0	38	38	3	0	38	38

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1602 / LCS ASW Mission Modules

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0603596N
Line Item MDAP/MAIS Code: 000		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	62.976	1.565	3.594	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	68.135
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	62.976	1.565	3.594	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	68.135
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**62.976**	**1.565**	**3.594**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**68.135**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	1.675	0.234	0.208	-	0.208	-	-	-	-	-	2.117
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Anti-Submarine Warfare (ASW) Mission Package (MP) enables the Littoral Combat Ship (LCS) to conduct ASW operations against modern threat submarines. Specific ASW capabilities include protecting forces in transit, protecting joint operating areas, and establishing ASW barriers. The ASW MP is composed of the Escort Mission Module (EMM) and the Aviation Mission Module (AVMM). The suite provides the warfighter capabilities that can be employed for ASW area search as well as High Value Unit (HVU) escort missions.

The EMM components procured in this budget include a Variable Depth Sonar (VDS), a Multi-Function Towed Array (MFTA), associated support equipment and Support Containers. When coupled with a Mission Package Computing Environment (MPCE) Sonar Signal Processing System (SSPS), procured through LCS MM Common Equipment (OPN BLI 1600), the VDS, MFTA, and associated support equipment/ containers encompass the full complement of LCS ASW Escort capabilities. The VDS is an acoustic sensor that can be towed at various speed and depths to perform effective ASW search. The VDS contains a Dual Mode Array Transmitter (DART) that utilizes the MFTA and Sonar Signal Processing System to detect, localize, and track underwater targets during ASW escort and large area search missions.

The AVMM provides airborne threat localization and engagement capability via an MH-60R helicopter equipped with MK54 torpedoes, dipping sonar, periscope detecting radar, and sonobuoys.

Other Related Budgets: BLIs: OPN 1600, RDT&E 0603596N

[P5 / (AS001) - ASW Escort Module]: The ASW Escort Mission Module (EMM) contains the sensors and signal processing required to detect, classify and localize submarine threats. The EMM consists of two towed sensors; a Variable Depth Sonar (VDS) active source and a Multi Function Towed Array (MFTA) passive/bi-static active receiver; launch, handling and recovery equipment for the towed sensors, and AN/ SQQ-89 V(15) active and passive signal processing applications.

[P5 / ASW Support Containers]: The foundation of each ASW Support Container (SC) is an International Organization for Standardization (ISO) compliant shipping container. The ISO shipping containers are outfitted with Unistrut rails (for shelving and drawer attachments), lighting (standard/emergency), fire/smoke alarms, service panels for power, and a circuit breaker box. From this base container configuration, a variety of racks, cradles, and handling gear can be installed as needed to form a SC.

[P5 / (AS900) - Consulting Services]: Provides program management support, engineering and technical support, studies, analysis and evaluation on mission module systems.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1602 / LCS ASW Mission Modules

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603596N

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-5	1 / LCS ASW Mission Modules	P-5a, P-21			- / 58.975	- / 1.565	- / 3.594	- / 0.000	- / 0.000	- / 0.000
P-3a	1 / ASW MP Modifications (Permanent Installation)				- / 4.001	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 62.976**	**- / 1.565**	**- / 3.594**	**- / 0.000**	**- / 0.000**	**- / 0.000**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-5	1 / LCS ASW Mission Modules	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / ASW MP Modifications (Permanent Installation)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.001
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 68.135**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The LCS ASW MP has been devested. FY 2023 is completing delivery one Production DART system.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules	Item Number / Title [DODIC]: 1 / LCS ASW Mission Modules
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	58.975	1.565	3.594	0.000	0.000	0.000
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	58.975	1.565	3.594	0.000	0.000	0.000
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**58.975**	**1.565**	**3.594**	**0.000**	**0.000**	**0.000**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Hardware - (AS001) - ASW Escort Module Cost																		
Recurring Cost																		
1.1.1) Variable Depth Sonar	19,241K	1	19.241	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) Variable Depth Sonar Engineering Change Proposals (1)	20,757K	1	20.757	-	-	0.000	-	-	1.329	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) Multi Function Towed Array(†)	4,217K	2	8.434	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.4) Production Engineering	-	-	4.004	-	-	1.447	-	-	1.839	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*52.436*	-	-	*1.447*	-	-	*3.168*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - (AS001) - ASW Escort Module Cost	**-**	**-**	***52.436***	**-**	**-**	***1.447***	**-**	**-**	***3.168***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - (AS005) - ASW Mission Package Support Equipment and Containers Cost																		
Recurring Cost																		
2.1.1) ASW Support Containers(†) (2)	687,500.00	4	2.750	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) ASW Support Equipment (3)	-	-	3.028	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*5.778*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - (AS005) - ASW Mission	**-**	**-**	***5.778***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules	Item Number / Title [DODIC]: 1 / LCS ASW Mission Modules
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Package Support Equipment and Containers Cost																		
Support - (AS900) - Consulting Services Cost																		
3.1) Consulting Services	-	-	0.761	-	-	0.118	-	-	0.426	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - (AS900) - Consulting Services Cost	**-**	**-**	***0.761***	**-**	**-**	***0.118***	**-**	**-**	***0.426***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Gross/Weapon System Cost	**-**	**-**	**58.975**	**-**	**-**	**1.565**	**-**	**-**	**3.594**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**

(†) indicates the presence of a P-5a

Footnotes:

(1) This cost element funds Engineering Change Proposals (ECPs) required for the production of the Escort Mission Module's Variable Depth Sonar (VDS).

(2) There are four support containers per ASW MP.

(3) ASW MP Support Equipment funds procure the following items: Variable Depth Sonar (VDS) Crate, VDS reel pallet, Multi-Function Towed Array (MFTA) reel pallet, MFTA tow cable reel pallet, Ramp Spanning Structure, Cabinets for Sonobuoys, Expendable Bathythermograph (XBT) probes, spreader bars, and power distribution unit.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules	Item Number / Title [DODIC]: 1 / LCS ASW Mission Modules

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.3) Multi Function Towed Array(†)		2021	Lockheed Martin / Syracuse, NY	C / FFP	NAVSEA	Jun 2021	Jun 2023	2	4,217K	Y		
2.1.1) ASW Support Containers(†)		2021	Northrop Grumman / BETHPAGE, NEW YORK	C / FFP	NAVSEA	Mar 2021	Mar 2023	4	687,500.00	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1602 / LCS ASW Mission Modules	**Item Number / Title [DODIC]:** 1 / LCS ASW Mission Modules

Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
							Calendar Year 2021												Calendar Year 2022												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.3) Multi Function Towed Array																															
	1	2021	NAVY	2	0	2									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
2.1.1) ASW Support Containers (2)																															
	2	2021	NAVY	4	0	4						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1602 / LCS ASW Mission Modules	**Item Number / Title [DODIC]:** 1 / LCS ASW Mission Modules

Cost Elements (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
							Calendar Year 2023												Calendar Year 2024												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.3) Multi Function Towed Array																															
	1	2021	NAVY	2	0	2	-	-	-	-	-	-	-	-	2																0
2.1.1) ASW Support Containers (2)																															
	2	2021	NAVY	4	0	4	-	-	-	-	-	2	2																		0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1602 / LCS ASW Mission Modules	**Item Number / Title [DODIC]:** 1 / LCS ASW Mission Modules

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin - Syracuse, NY	1	4	8	0	0	24	24	0	0	24	24
2	Northrop Grumman - BETHPAGE, NEW YORK	1	8	32	3	0	24	24	0	0	24	24

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1602 / LCS ASW Mission Modules	**Modification Number / Title:** 1 / ASW MP Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	4.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.001
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	4.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.001
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**4.001**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4.001**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

For LCS Freedom variant, seaframe changes include stern door modifications and foundation additions for the Launch and Recovery Assembly (LRA), winch, and level wind. For the LCS Independence variant, seaframe changes include foundation additions for the LRA, winch, and level wind, as well as darken ship modifications.

[ASW MP Kits] Funds the modifications to the current LCS designs to accommodate the ASW mission package configuration. The LCS ships assigned to the ASW Division will require the installation of the ASW ship Alterations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1602 / LCS ASW Mission Modules	**Modification Number / Title:** 1 / ASW MP Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: ASW Mission Package	**Modification Type:** Permanent Installation	**Related RDT&E PEs:** 0603596N

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ASW MP Modifications												
A Kits												
Recurring												
1.1.1) ASW MP Kits - NonOrganic	1 / 1.218	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.218
Subtotal: Recurring	*- / 1.218*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.218*
Subtotal: ASW MP Modifications	*1 / 1.218*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 1.218*
Subtotal: Procurement, All Modification Items	*- / 1.218*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.218*
Support *(All Modification Items)*												
2.1) Engineering Services	1 / 1.238	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	1 / 1.238
Subtotal: Support	*- / 1.238*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.238*
Installation												
Modification Item 1 of 1: ASW MP Modifications	- / 1.545	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.545
Subtotal: Installation	*- / 1.545*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.545*
Total												
Total Cost (Procurement + Support + Installation)	**4.001**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4.001**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1602 / LCS ASW Mission Modules	**Modification Number / Title:** 1 / ASW MP Modifications
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: ASW MP Modifications

Manufacturer Information

Manufacturer Name: Planning Yard Services	Manufacturer Location: Var
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 3

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Nov 2022					
Delivery Dates		Feb 2023					

Installation Information

Method of Implementation: [none specified]:: Installation Name: ASW MP Kits

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 1.545	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.545
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 1.545	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.545

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 000		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	201.983	3.395	5.100	12.102	0.000	12.102	11.101	3.500	0.100	0.146	14.236	251.663
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	201.983	3.395	5.100	12.102	0.000	12.102	11.101	3.500	0.100	0.146	14.236	251.663
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**201.983**	**3.395**	**5.100**	**12.102**	**0.000**	**12.102**	**11.101**	**3.500**	**0.100**	**0.146**	**14.236**	**251.663**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.864	0.900	4.526	-	4.526	-	-	-	1.564	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Surface Warfare (SUW) Mission Package (MP) increases firepower and offensive/defensive capabilities against large numbers of highly maneuverable, fast, small craft threats, giving Littoral Combat Ships (LCS) the ability to protect the sea lanes and move a force quickly through a choke point or another strategic waterway. With the SUW MP embarked, LCS has enhanced detection and engagement capability against enemy small craft and similar littoral surface threats.

The SUW MP is composed of the Gun Mission Module (GMM), Maritime Security Module (MSM), Surface-to-Surface Missile Module (SSMM), and an Aviation Module. The SUW MP with the GMM, MSM, and Aviation Module (with the MH-60R) achieved Initial Operational Capability (IOC) in FY 2014. The GMM comprises two high velocity 30mm cannons to augment the ship's 57mm gun and the MSM supports the embarkation of visit, board, search, and seizure (VBSS) teams.

The inventory objective of ten deployable SUW MP has been delivered to the Fleet. Fleet requirements for SSMM has been met with five (5) SSMM production assets. A SUW MP is deployable and capable of meeting its focused mission requirements on an LCS only when it includes the full complement of Common Mission Modules Equipment (Line Item Number 1600) and the full complement of mission systems that composed the LCS SUW Mission Module (Line Item Number 1603).

The program has increased the capability of the SUW MP with the addition of the MQ-8 Fire Scout Vertical Take-off Unmanned Aerial Vehicle (VTUAV) for the detection, identification, and classification of surface contacts, and a Surface-to-Surface Missile Module (SSMM) to meet the in-close engagement capability against surface threats. The SSMM achieved IOC in FY 2019. Each SSMM is composed of one MK 61 MOD 0 SSMM Enclosure and one MK 210 Launcher Set.

Other Related Budgets: BLIs: OPN 1600, WPN 4221, RDT&E 0603596N

[P40A / SU001 - GUN MODULE]: The Gun Mission Module (GMM) comprises two high velocity 30mm cannons to augment the ship's 57mm gun, and embarked support aircraft (MH-60R helicopter with Hellfire missile and the MQ-8B Fire Scout Vertical Take-off and Landing Tactical Unmanned Aerial Vehicle (VTUAV)) for the detection, identification, and classification of surface contacts.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 000		

[P40A / Gun Module Modernization/Technology Refresh]: Procures modernized Gun Module Remote Control System (GMRCS) and Gun User Interface Device (GUID), each contain computational equipment (including critical MAGIC-1s and Maintenance Station laptops) that are end-of-life and can no longer be procured. The rugged small form factor MAGIC1 display computer combines state-of-the-art CPU technology with the latest graphics processing units (GPUs) to deliver unprecedented levels of performance for GMM video and non-video applications.

[P40A / SU002 - SURFACE-TO-SURFACE MISSILE MODULE (SSMM)]: The SSMM provides the LCS ship, the ability to prosecute sea-based and shore-based threats in the littorals using surface-to-surface missiles. The SSMM uses the Army's Longbow Hellfire missile, which is currently in DoD inventory. The SSMM consists MK 61 MOD 0 SSMM Enclosure and MK 210 Launchers. When combined, the SSMM is a launcher system with self-contained technical fire control, electronics, and software for remote operations. The missile design is capable of engaging Fast Attack Craft/Fast In-shore Attack Craft (FAC/FIAC) threats, thereby, providing the LCS a standoff engagement capability.

[P40A / SU003 - MARITIME SECURITY MODULE]: The Maritime Security Module (MSM) provides LCS with the capability to conduct Level II Visit, Board, Search and Seizure (VBSS) operations and the ability to conduct anti-piracy and maritime interdiction missions. This budget line procures hardware for a full MSM that includes two 11 meter Rigid Hull Inflatable Boats (RHIB), two boat cradles, a VBSS Allowance Equipment List (AEL) for communications and tactical equipment and support containers. Funding also includes production, assembly, installation and checkout of all mission system components.

[P40A / SU004 - SUW MP Obsolete/Tech Refresh]: Funding provides the replacement of obsolete Commercial off-the-Shelf (COTS) that require modernization including NUVO computer, (ATACNAV), Heating, ventilation, and air conditioning (HVAC) components, air flow sensor, thermal couple, signal conditioner, Freon detector etc. The full complement of GMMs and MSMs, and 5 SSMMs that will be in service by FY24 will face major obsolescence and sparing challenges if not funded.

[P40A / SU900 - CONSULTING SERVICES]: Provides program management support, engineering and technical support, studies, analysis and evaluation on mission module systems.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	LCS SUW Mission Packages	P-5a, P-21			- / 201.983	- / 3.395	- / 5.100	- / 12.102	- / -	- / 12.102
P-40	**Total Gross/Weapon System Cost**				**- / 201.983**	**- / 3.395**	**- / 5.100**	**- / 12.102**	**- / 0.000**	**- / 12.102**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
In FY 2024, funding is requested for Gun Module Modernization/Technology Refresh, procurement of Replacement 11m RHIBs for the Maritime Security Module (MSM), and SUW MP Obsolescence/Tech Refresh. These efforts fund modernization, sparing, and obsolescence/tech refresh requirements that are necessary to continue deploying the Navy's 10 SUW MPs with GMM and MSM, and 5 SSMM.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1603 / LCS SUW Mission Modules	Aggregated Items Title: LCS SUW Mission Packages

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) SU001 - GUN MODULE																				
1.1) MK-50 Gun Module	A		3,735K	18	67.224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) MK-46 Gun Weapon System	A		2,936K	16	46.975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) Gun Module Modernization/ Technology Refresh	A		-	-	-	-	-	-	-	-	3.200	-	-	5.100	-	-	-	-	-	5.100
1.4) PRODUCTION ENGINEERING SUPPORT	A		-	-	11.754	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) SU001 - GUN MODULE			**-**	**-**	***125.953***	**-**	**-**	**-**	**-**	**-**	***3.200***	**-**	**-**	***5.100***	**-**	**-**	**-**	**-**	**-**	***5.100***
2) SU002 - SURFACE-TO-SURFACE MISSILE MODULE (SSMM)																				
2.1) SURFACE-TO-SURFACE MISSILE MODULE (1)(†)	A		8,929K	5	44.646	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) SSMM ECPs (2)	A		-	-	4.199	-	-	0.194	-	-	1.550	-	-	4.700	-	-	-	-	-	4.700
2.3) SSMM Launcher Sets (3)	A		1,232K	5	6.160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4) PRODUCTION ENGINEERING SUPPORT (4)	A		-	-	2.857	-	-	3.006	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) SU002 - SURFACE-TO-SURFACE MISSILE MODULE (SSMM)			**-**	**-**	***57.862***	**-**	**-**	***3.200***	**-**	**-**	***1.550***	**-**	**-**	***4.700***	**-**	**-**	**-**	**-**	**-**	***4.700***
3) SU003 - MARITIME SECURITY MODULE																				
3.1) MARITIME SECURITY MODULE	A		1,125K	10	11.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) PRODUCTION ENGINEERING	A		-	-	2.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) SU003 - MARITIME SECURITY MODULE			**-**	**-**	***13.252***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) SU004 - SUW MP Obsolete/Tech Refresh																				
4.1) Obsolescence and Technology Refresh	A		-	-	-	-	-	-	-	-	0.350	-	-	2.133	-	-	-	-	-	2.133
Subtotal: 4) SU004 - SUW MP Obsolete/Tech Refresh			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***0.350***	**-**	**-**	***2.133***	**-**	**-**	**-**	**-**	**-**	***2.133***
5) SU900 - CONSULTING SERVICES																				
5.1) CONSULTING SERVICES	A		-	-	4.916	-	-	0.195	-	-	-	-	-	0.169	-	-	-	-	-	0.169
Subtotal: 5) SU900 - CONSULTING SERVICES			**-**	**-**	***4.916***	**-**	**-**	***0.195***	**-**	**-**	**-**	**-**	**-**	***0.169***	**-**	**-**	**-**	**-**	**-**	***0.169***
Total			**-**	**-**	**201.983**	**-**	**-**	**3.395**	**-**	**-**	**5.100**	**-**	**-**	**12.102**	**-**	**-**	**-**	**-**	**-**	**12.102**

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules	**Aggregated Items Title:** LCS SUW Mission Packages

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

(†) indicates the presence of a P-5a

Footnotes:

(1) The Surface-to-Surface Missile Module (SSMM) cost element includes the MK 61 MOD 0 SSMM Enclosure.

(2) Engineering Change Proposals (ECPs) support SSMM producibility changes in line with unit production.

(3) One SSMM Launcher Set comprises 12 MK 210 Missile Launchers.

(4) Production Engineering is required in all years of SSMM procurement as well as 24 months after procurement to fund factory acceptance testing in year of delivery.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1603 / LCS SUW Mission Modules	Aggregated Items: LCS SUW Mission Packages

Item Number / Title [DODIC]	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2) SU002 - SURFACE-TO-SURFACE MISSILE MODULE (SSMM)												
2.1) SURFACE-TO-SURFACE MISSILE MODULE (1)(†)		2020	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / FFP	NAVSEA	Sep 2020	Jun 2023	1	8,851K	Y		
2.1) SURFACE-TO-SURFACE MISSILE MODULE (1)(†)		2021	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / FFP	NAVSEA	Dec 2020	Sep 2023	3	6,279K	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules	**Aggregated Items:** LCS SUW Mission Packages

Items (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
										Calendar Year 2020												Calendar Year 2021									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) SU002 - SURFACE-TO-SURFACE MISSILE MODULE (SSMM)																															
2.1) SURFACE-TO-SURFACE MISSILE MODULE [1]																															
Prior Years Deliveries: 1																															
	11	2020	NAVY	1	0	1												A -	-	-	-	-	-	-	-	-	-	-	-	-	1
	11	2021	NAVY	3	0	3															A -	-	-	-	-	-	-	-	-	-	3
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules	**Aggregated Items:** LCS SUW Mission Packages

Items (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
							Calendar Year 2022												Calendar Year 2023												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) SU002 - SURFACE-TO-SURFACE MISSILE MODULE (SSMM)																															
2.1) SURFACE-TO-SURFACE MISSILE MODULE [1]																															
Prior Years Deliveries: 1																															
	11	2020	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1				0
	11	2021	NAVY	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules	**Aggregated Items:** LCS SUW Mission Packages

Items (Units in Each)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
										Calendar Year 2024												Calendar Year 2025									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2) SU002 - SURFACE-TO-SURFACE MISSILE MODULE (SSMM)																															
2.1) SURFACE-TO-SURFACE MISSILE MODULE [1]																															
Prior Years Deliveries: 1																															
	11	2020	NAVY	1	1	0																									0
	11	2021	NAVY	3	1	2	-	-	1	-	-	1																			0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules	**Aggregated Items:** LCS SUW Mission Packages

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	NORTHROP GRUMMAN - BETHPAGE, NEW YORK	1	2	8	3	3	25	28	0	0	33	33

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0603581N
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	235.521	153.726	116.026	171.704	0.000	171.704	175.599	245.414	207.226	226.428	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	235.521	153.726	116.026	171.704	0.000	171.704	175.599	245.414	207.226	226.428	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**235.521**	**153.726**	**116.026**	**171.704**	**0.000**	**171.704**	**175.599**	**245.414**	**207.226**	**226.428**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	4.134	1.883	4.511	-	4.511	0.091	6.486	6.270	2.568	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Modernization/maintenance efforts support Littoral Combat Ship (LCS) requirements to remain operational and meet mission needs. This line provides funding for ship changes and improvements related to mandatory safety, cyber security remediation, habitability, obsolescence, reliability, command and control, and communications to maintain LCS operational availability and achieve ships' expected service life. Funding covers planned CNO availabilities and two years of planning costs and long lead time materials (LLTM) in advance of CNO availabilities. Beginning in FY 2021, this line provides funds for the procurement, planning, installation design, and installation for Lethality and Survivability (L&S) modifications for both LCS variants (Independence and Freedom). L&S modifications seek to leverage existing Navy Program of Record systems allowing for more rapid implementation of holistic combat system enhancements. These modifications will improve displays, infrastructure, radar, tactical data link, cyber security, and navigation capabilities. L&S introduces commonality between LCS variants and other surface combatants leveraging common source libraries, Total Ship Computing Environment (TSCE), MK-20 Electro-Optical Surveillance System, Surface Electronic Warfare Improvement Program, Nulka, MK-160 Gun Computer System, Data Links (IND only), Mode 5 IFF (IND only) and Navigation systems. The use of Navy Standard systems improves capability, simplifies training, and decreases life cycle costs.

MT002 - LCS Class Design Improvements
This budget line covers the procurement and installation of a Condition Based Maintenance (CBM) System. Requirement is specific to combat systems and C4I equipment, designed to monitor and collect maintenance data then periodically transfer the data ashore via a Virtualized Data Transport System (VDTS) for analysis. The CBM equipment monitors performance of SPS-75 and SPS-77 Radars, MK-49 RAM, and MK-110 Gun.

MT003 - LCS Maintenance Modernization
Modernization funds back-fit, upgrade, and fact of life obsolescence changes on Littoral Combat Ships.
The Modernization construct categorizes changes into four pillars: Command, Control, Communications, Computers, & Intelligence (C4I); Hull, Mechanical & Electrical (HM&E); Combat System; and Mission Package. These categories enable improved planning and tracking of ship changes as technology and mission evolve. The scope/requirements for maintenance modernization include hundreds of Ship Change Documents (SCDs) and over 1,000 planned installations (across the FYDP) during LCS CNO and maintenance availabilities driven/maintained by the Navy Data Environment (NDE), the Navy's centralized database and web-based application used to manage Navy Modernization, Maintenance, Logistics, and Workload/Performance. NDE monitors/maintains the LCS Class availabilities for their scheduled modification by Hull and by year, to include the advanced planning, procurement, and installation of all modernization/SCD's to the LCS class.

Combat Systems funding covers development, procurement, installation and testing of combat system Engineering Change Proposals (ECPs)and applicable SCDs for both LCS variants - Freedom and Independence - as well as the Littoral Warfare Engineering Capability (LWEC) land-based equipment. Applicable modernization SCDs are programmed into the NDE database. Advanced planning and Design

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1604 / LCS In-Service Modernization	
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603581N
Line Item MDAP/MAIS Code: N/A		

Services Allocation (DSA) begins two years prior to the start of a CNO Availability. Modernization/technical upgrades focus primarily on safety, cyber, and obsolescence SCDs for both variants, specific to the unique configuration of the following systems: Total Ship Computing Environment (TSCE) Hardware/Software, SPS-77 Radar (all variants), Electronic Surveillance Measures (ESM), Integrated Combat Management System (ICMS) and Atalanta Warfare System (AtWS) software, MK 110 57mm Gun Mount and associate fire control, and Electro Optical/Infrared (EO/IR) system. Long lead time material (LLTM) is typically funded 12-18 months in advance of installations in accordance with planning milestones.

Per PB23, USS GERMANTOWN (LSD 42), USS GUNSTON HALL (LSD 44), USS TORTUGA (LSD 46), and USS ASHLAND (LSD 48) were scheduled to be decommissioned in FY23. The congressionally signed FY23 National Defense Authorization Act (NDAA) later prohibited the retirement or inactivation of certain naval vessels including the 4 LSDs in order to support the United States Marine Corps (USMC) 31-large deck amphibious ship requirement and provided FY23 funding to support these ships.

Funding for DSA begins two years prior to the start of an Availability. The official schedule for CNO Availabilities is maintained in the NDE and updated by Commander Naval Surface Force Atlantic and Pacific schedulers. The CNO approved schedule for LCS Availabilities included in the requirements is as follows (as of 17 February 2023):

CNO/Super CMAV avails:
FY22: LCS 12, 16
FY23: LCS 18, 22
FY24: LCS 10, 17, 19, 20, 24
FY25: LCS 14, 21, 23, 26, 28
FY26: LCS 12, 13, 15, 16, 18, 25, 30, 32, 34
FY27: LCS 17, 19, 20, 22, 27, 29, 36
FY28: LCS 10, 14, 21, 23, 24, 26, 31

Due to contract award dates, funds for install are awarded before the start of the availability. Availabilities that start within the first quarter of a FY are awarded in the prior FY.

MT004 LCS Lethality and Survivability
L&S funding will provide for hardware procurement and installation of a common Combat Management Systen (CMS) comprised of Government Furnished Equipment (GFE), associated technical support data to upgrade the existing contractor furnished equipment, and associated cybersecurity modifications that will be back-fit onboard in-service LCS platforms. Funding will also provide for the non-recurring engineering to develop technical data packages and development of hardware and software packages necessary to integrate and test the common software baseline for two different LCS Class variants - Freedom and Independence. Production and planning support services for these upgrades are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis, with installation to be accomplished during planned CNO Availabilities. L&S plan upgrades the following systems to GFE resulting one combat system baseline with a common Combat Management System: Total Ship Computing Environment (TSCE), MK-20 Electro-Optical Surveillance System, Surface Electronic Warfare Improvement Program, Nulka, MK-160 Gun Computer System, Data Links (IND only), Mode 5 IFF (IND only) and Navigation systems. LCS Combat System L&S phasing began with procurement in FY21.

[P40A / Congressional Add Combat and Comms System Acceleration]: In FY22, Congressional increase of $10M for the installation of AN/SYM-3 is appropriated. In FY23, Congressional increase of $12M for the installation of AN/SYM-3 is appropriated. SYM-3 is a CBM system designed to monitor and collect maintenance data and periodically transfer the data ashore via the Virtualized Data Transport System (VDTS) data transport mechanism for analysis. SYM-3 provides this support for the SPS Radar, MK-49 RAM, and MK-110 Naval Gun System (NGS).

[P40A / FY23 Congressional Add - LCS 3]: In FY23, Congressional increase of $13M for the maintenance of USS Fort Worth (LCS 3) is appropriated.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0603581N
Line Item MDAP/MAIS Code: N/A		

[P40A / Lethality and Survivability AIT & Shipboard Qualification]: Funds are for Third Party Planning, Alteration Installation Team (AIT) installing Lethality and Survivability Modernization equipment, Combat System Shipboard Qualification Test planning and execution with associated test team, and on-site logistics representatives in support of the LCS Modernization Program.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** 0603581N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	LCS In-Service Modernization				- / 98.000	- / 11.203	- / 54.000	- / -	- / -	- / -
P-3a	1 / LCS Maintenance Modernization (TBD)				- / 94.553	- / 108.543	- / 34.783	- / 82.078	- / 0.000	- / 82.078
P-3a	2 / Combat System Lethality & Survivability Upgrades (TBD)				- / 42.968	- / 33.980	- / 27.243	- / 89.626	- / 0.000	- / 89.626
P-40	**Total Gross/Weapon System Cost**				**- / 235.521**	**- / 153.726**	**- / 116.026**	**- / 171.704**	**- / 0.000**	**- / 171.704**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	LCS In-Service Modernization				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / LCS Maintenance Modernization (TBD)				- / 107.513	- / 144.363	- / 77.312	- / 79.052	- / 0.000	- / 728.197
P-3a	2 / Combat System Lethality & Survivability Upgrades (TBD)				- / 68.086	- / 101.051	- / 129.914	- / 147.376	Continuing	Continuing
P-40	**Total Gross/Weapon System Cost**				**- / 175.599**	**- / 245.414**	**- / 207.226**	**- / 226.428**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2024 funding for LCS In-Service Modernization continues to support the following efforts:

MT002 - LCS Class Design Improvements
Congressional increase for the installation of AN/SYM-3 included in MT002. SYM-3 is a CBM system designed to monitor and collect maintenance data and periodically transfer the data ashore via the VDTS data transport mechanism for analysis. SYM-3 provides this support for the SPS Radar, MK 110 NGS, and MK 49 RAM.

MT003 - LCS Maintenance Modernization
Littoral Combat Ships (LCS) Maintenance Modernization funding includes Ship Change Documents (SCDs) to maintain or improve reliability, obsolescence, C4I, maintainability, and safety efforts/alterations, and cyber security required by the Navy for the LCS Class to maintain Authority to Operate (ATO). The scope/requirements for maintenance modernization include hundreds of SCDs and over 1,000 planned installations (across the FYDP) during LCS CNO availabilities driven/maintained by the NDE, the Navy's centralized database and web-based application used to manage Navy Modernization, Maintenance, Logistics, and Workload/Performance.

NDE monitors/maintains the LCS Class availabilities for their scheduled modification by Hull, by year to include the advanced planning, procurement and installation of all modernization/SCD's to the LCS class. Modernization SCDs include: Strike Team Phase I reliability improvements, TSCE Hardware/Software Upgrades, TCSE Cyber Security Layer Defense Enhancements, Command and Control Processor (C2P) upgrades, Machinery Control System upgrades, FRE Electrical Plant upgrades, along with other HM&E, C4I, and non-L&S Combat System upgrades to support sustaining the platform. Long lead material procurement, advance planning and design services allocation (DSA) need to be funded up to two years in advance of installations in accordance with planning milestones.

Landing Ship Docking (LSD) funding for USS GERMANTOWN (LSD 42), USS GUNSTON HALL (LSD 44), USS TORTUGA (LSD 46), and USS ASHLAND (LSD 48) includes maturation of Ship Change Documents (SCDs) to address growing obsolescence, critical safety concerns and cyber security requirements in support of the LSD Class operational mission. Additional efforts include condition assessment

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1604 / LCS In-Service Modernization	
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603581N
Line Item MDAP/MAIS Code: N/A		

evaluations and LSD harvesting. The requirements for maintenance modernization include In -Service Engineering Agent (ISEA) coordinated grooms/assessments, and the identification of critical parts, as well as long lead time material (LLTM).

MT004 LCS Lethality and Survivability
L&S funding will provide for hardware procurement and installation of a common Combat Management Systen (CMS) comprised of Government Furnished Equipment (GFE), associated technical support data to upgrade the existing contractor furnished equipment, and associated cybersecurity modifications that will be back-fit onboard in-service LCS platforms. Funding will also provide for the non-recurring engineering to develop technical data packages and development of hardware and software packages necessary to integrate and test the common software baseline for two different LCS Class variants - Freedom and Independence. Production and planning support services for these upgrades are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis, with installation to be accomplished during planned CNO Availabilities. L&S plan upgrades the following systems to GFE resulting one combat system baseline with a common Combat Management System: Total Ship Computing Environment (TSCE), MK-20 Electro-Optical Surveillance System, Surface Electronic Warfare Improvement Program, Nulka, MK-160 Gun Computer System, Data Links (IND only), Mode 5 IFF (IND only) and Navigation systems. LCS Combat System L&S phasing began with procurement in FY21.

Installation costs across the FYDP vary depending on current port rates and install costs will be updated once an execution port is assigned. Port rates are updated every year by Commander, Navy Regional Maintenace Center (CNRMC) based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. Due to the differences between the Independence and Freedom Variant, installation costs will also vary between variants. Installation funding for a ship is divided over a three-year period: Installation execution funding in the year of availability, Design Service Allocation (DSA) two years prior to availability, and DSA in the year of the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM).

LCS Combat System L&S Procurement and Installation Schedule:
FY22: Procure QTY 1(1 IND/0 FRE); Install QTY 0(0 IND/0 FRE)
FY23: Procure QTY 1(1 IND/0 FRE); Install QTY 0(0 IND/0 FRE)
FY24: Procure QTY 2(2 IND/0 FRE); Install QTY 1(1 IND/0 FRE)
FY25: Procure QTY 1(1 IND/0 FRE); Install QTY 1(1 IND/0 FRE)
FY26: Procure QTY 1(1 IND/0 FRE); Install QTY 2(2 IND/0 FRE)
FY27: Procure QTY 3(3 IND/0 FRE); Install QTY 1(1 IND/0 FRE)
FY28: Procure QTY 3(3 IND/0 FRE); Install QTY 1(1 IND/0 FRE)

Note:

In FY23, Congressional increase of $12M for the installation of AN/SYM-3 is appropriated. SYM-3 is a CBM system designed to monitor and collect maintenance data and periodically transfer the data ashore via the Virtualized Data Transport System (VDTS) data transport mechanism for analysis. SYM-3 provides this support for the SPS Radar, MK49 RAM, and MK 110 Naval Gun System (NGS).

In FY26, Non-Recurring Engineering, Design Services Allocation (DSA) and procurement for NMT, MST, Machinery Control System, Electric Plant Control System, Manual Switchboard, Hazmat Stowage Risk Mitigation, and other various HM&E, C4I, and Combat Systems alterations for the Freedom Variant. DSA costs will also vary by kit due to differences in scope, complexity, and first installation compared to follow-on installations.

FY23 - FY27 decrease of Lethality and Survivability (L&S) funding due to decommissioning of Freedom variant hulls.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Aggregated Items Title:** LCS In-Service Modernization

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) MT002 LCS Class Design Improvements																				
1.1) FY18 Congressional Add - OTH, IFF Mode 5, BLOS, LWEC	A		-	-	84.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) Congressional Add Combat and Comms System Acceleration	A		-	-	14.000	-	-	10.000	-	-	12.000	-	-	-	-	-	-	-	-	-
1.3) FY23 Congressional Add - LCS 3	A		-	-	-	-	-	-	-	-	13.000	-	-	-	-	-	-	-	-	-
Subtotal: 1) MT002 LCS Class Design Improvements			**-**	**-**	***98.000***	**-**	**-**	***10.000***	**-**	**-**	***25.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) MT003 LCS Class Maintenance Modernization																				
2.1) FY23 Congressional Add - LSD 42 , 44 , 46, 48 Mod	A		-	-	-	-	-	-	-	-	14.500	-	-	-	-	-	-	-	-	-
Subtotal: 2) MT003 LCS Class Maintenance Modernization			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***14.500***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) MT004 Lethality and Survivability																				
3.1) Lethality and Survivability AIT & Shipboard Qualification [1]	A		0.00	1	0.000	-	-	1.203	-	-	14.500	-	-	-	-	-	-	-	-	-
Subtotal: 3) MT004 Lethality and Survivability			**-**	**-**	***0.000***	**-**	**-**	***1.203***	**-**	**-**	***14.500***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**98.000**	**-**	**-**	**11.203**	**-**	**-**	**54.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

[1] Funds are for Third Party Planning, Alteration Installation Team (AIT) installing Lethality and Survivability Modernization equipment, Combat System Shipboard Qualification Test planning and execution with associated test team, and on-site logistics representatives in support of the LCS Modernization Program.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Modification Number / Title:** 1 / LCS Maintenance Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	94.553	108.543	34.783	82.078	0.000	82.078	107.513	144.363	77.312	79.052	0.000	728.197
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	94.553	108.543	34.783	82.078	0.000	82.078	107.513	144.363	77.312	79.052	0.000	728.197
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**94.553**	**108.543**	**34.783**	**82.078**	**0.000**	**82.078**	**107.513**	**144.363**	**77.312**	**79.052**	**0.000**	**728.197**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

LCS Maintenance Modernization
The Modernization construct categorizes changes into four pillars: Command, Control, Communications, Computers, & Intelligence (C4I); Hull, Mechanical & Electrical (HM&E); Combat System; and Mission Packages. This enables improved planning and tracking of ship changes as technology and mission evolve. These pillars provide a more structured framework to document SCD priorities for the modernization and sustainment of the INDEPENDENCE variant ships. Each pillar is divided in blocks which represent the LCS baselines.

C4I Pillar:
The C4I Pillar provides modernization capabilities for three components 1) Block Buy Configuration. 2) C4I Systems Required for Phase 1 L&S Upgrades/CFE to GFE upgrades. 3) L&S Phase II Support/Future Requirements.
C4I BLK 1 will provide critical obsolescence upgrades to maintain ATO. This includes MDLMS and Coalition Comms upgrades.
C4I BLK 2 ensures LCS are configured to support L&S Phase I. This includes the alt for the Command and Control Processor (C2P) system, required to support Lethality and Survivability (L&S) alterations. The C2P capability provides real-time control and management of the Tactical Digital Information Links (TADILs) such as Link-11, Link-16, S-TADIL J, Joint Range Extension (JRE), and Link-22. Additionally, this includes upgrades to TSCE HW/SW upgrades for IND Variant and external crypto upgrades for both variants.
C4I BLK 3 provides future fact-of-life upgrades and obsolescence that would complement L&S Phase II installations.

HM&E Pillar:
The HM&E pillar provides modernization capabilities into the following components. 1) Critical Program Initiatives 2) CFE to GFE/Continued Priority Support 3) Structural Improvement
HM&E BLK 1 incudes capabilities to meet Fleet red-lines (Safe-to-Sail) and correct identified safety issues (Mandatory Safety Alterations), Strike Team Phase I alterations, and 72 Month Independence drydocking alterations. Additionally, block 1 includes VMS and IBS upgrades and Damage Control Tech Refresh.
HM&E BLK 2 provides the Machinery Control System Gov Solution, MOBI, A/C Chill Water pump improvement, Tank Top Pitting Improvement, Ground Detect Monitoring, and Strike Team Phase II alterations.
HM&E BLK 3 covers future structural improvement enhancements and other future fact-of-life upgrades.

Combat Systems Pillar:
Combat systems pillar is funded as L&S. L&S funding will provide for hardware procurement and installation of a common Combat Management System (CMS) comprised of government furnished equipment, associated technical support data to upgrade the existing

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Modification Number / Title:** 1 / LCS Maintenance Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

contractor furnished equipment, and associated cybersecurity modifications that will be back-fit onboard in-service LCS platforms. Funding will also provide for the non-recurring engineering to develop technical data packages
and development of hardware and software packages necessary to integrate and test the common software baseline for two different LCS Class variants - Freedom and Independence. Production and planning support services for
these upgrades are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis, with installation to be accomplished during planned CNO Availabilities. L&S plan upgrades the following systems
to Government Furnished Equipment (GFE) resulting in one combat system baseline with a common Combat Management System (CMS): Total Ship Computing Environment (TSCE), MK-20 Electro-Optical Surveillance System, Surface Electronic
Warfare Improvement Program, Nulka, MK-160 Gun Computer System, Data Links (IND only), Mode 5 IFF (IND only) and Navigation systems. LCS Combat System L&S phasing begins with procurement in FY21.

The funding for DSA begins two years prior to the start of an Availability. The official schedule for CNO Availabilities is maintained in the NDE and updated by Commander Naval Surface Force Atlantic and Pacific schedulers. The CNO approved schedule for LCS Availabilities included in the requirements is as follows (as of 17 February 2023):

CNO/Super CMAV avails:
FY22: LCS 12, 16
FY23: LCS 18, 22
FY24: LCS 10, 17, 19, 20, 24
FY25: LCS 14, 21, 23, 26, 28
FY26: LCS 12, 13, 15, 16, 18, 25, 30, 32, 34
FY27: LCS 17, 19, 20, 22, 27, 29, 36
FY28: LCS 10, 14, 21, 23, 24, 26, 31

Due to contract award dates, funds for install are awarded before the start of the availability. Availabilities that start within the first quarter of a FY are awarded in the prior FY.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Modification Number / Title:** 1 / LCS Maintenance Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) LCS Independence Maintenance Modernization - NonOrganic *Installation 1 of 1*	2 / 2.184	2 / 0.000	2 / 0.000	3 / 0.000	- / -	3 / 0.000	3 / 0.000	6 / 0.000	3 / 0.000	4 / 0.000	- / -	25 / 2.184
1.1.2) LCS Freedom Maintenance Modernization - NonOrganic (2) *Installation 1 of 1*	2 / 0.765	- / -	- / -	2 / 0.000	- / -	2 / 0.000	2 / 0.000	3 / 0.000	4 / 0.000	3 / 0.000	- / -	16 / 0.765
3.1.1) C4I Block 1 - NonOrganic *Installation 1 of 1*	- / 9.908	- / 8.421	- / 0.809	- / 0.948	- / -	- / 0.948	- / 0.152	- / 0.223	- / -	- / -	- / -	- / 20.461
4.1.1) C4I Block 2 - NonOrganic *Installation 1 of 1*	- / 3.214	- / 54.620	- / 11.761	- / 20.166	- / -	- / 20.166	- / 28.992	- / 29.588	- / 7.133	- / 8.549	- / -	- / 164.023
6.1.1) HM&E Block 1 - NonOrganic *Installation 1 of 1*	- / 11.084	- / 6.231	- / 1.083	- / 0.921	- / -	- / 0.921	- / 1.785	- / 0.919	- / 0.140	- / 0.295	- / -	- / 22.458
7.1.1) HM&E Block 2 - NonOrganic *Installation 1 of 1*	- / 0.760	- / 24.215	- / 5.773	- / 13.825	- / -	- / 13.825	- / 27.394	- / 27.881	- / 5.209	- / 4.065	- / -	- / 109.122
2.1) Enacted Rescissions - Organic(*)	- / 35.634	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 35.634
9.1.1) Combat Systems - NonOrganic(*)	- / -	- / -	- / -	- / 7.058	- / -	- / 7.058	- / 9.246	- / 12.415	- / 6.649	- / 6.799	- / -	- / 42.167
Subtotal: Procurement	*- / 63.549*	*- / 93.487*	*- / 19.426*	*- / 42.918*	*- / -*	*- / 42.918*	*- / 67.569*	*- / 71.026*	*- / 19.131*	*- / 19.708*	*- / 0.000*	*- / 396.814*
Installation												
Installation 1 of 1: GRP: LCS Installation	- / 31.004	- / 15.056	- / 15.357	- / 39.160	- / 0.000	- / 39.160	- / 39.944	- / 73.337	- / 58.181	- / 59.344	- / 0.000	- / 331.383
Subtotal: Installation	*- / 31.004*	*- / 15.056*	*- / 15.357*	*- / 39.160*	*- / -*	*- / 39.160*	*- / 39.944*	*- / 73.337*	*- / 58.181*	*- / 59.344*	*- / 0.000*	*- / 331.383*
Total												
Total Cost (Procurement + Support + Installation)	**94.553**	**108.543**	**34.783**	**82.078**	**0.000**	**82.078**	**107.513**	**144.363**	**77.312**	**79.052**	**0.000**	**728.197**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Modification Number / Title:** 1 / LCS Maintenance Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 1: GRP: LCS Installation

Manufacturer Information

Manufacturer Name: VARIOUS	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 12	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Nov 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025		
Delivery Dates	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026		

Installation Information

Method of Implementation: LCS Freedom / Independance Variant:: Installation Name: LCS Installation

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	5 / 31.004	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 31.004
FY 2022	- / -	2 / 15.056	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 15.056
FY 2023	- / -	- / -	2 / 15.357	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 15.357
FY 2024	- / -	- / -	- / -	5 / 39.160	0 / 0.000	5 / 39.160	- / -	- / -	- / -	- / -	0 / 0.000	5 / 39.160
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	5 / 39.944	- / -	- / -	- / -	0 / 0.000	5 / 39.944
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 73.337	- / -	- / -	0 / 0.000	9 / 73.337
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 58.181	- / -	0 / 0.000	7 / 58.181
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 59.344	0 / 0.000	7 / 59.344
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 31.004	2 / 15.056	2 / 15.357	5 / 39.160	0 / 0.000	5 / 39.160	5 / 39.944	9 / 73.337	7 / 58.181	7 / 59.344	0 / 0.000	42 / 331.383

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	5	-	2	-	-	-	2	-	-	-	5	-	-	-	5	-	-	-	9	-	-	-	7	-	-	-	7	-	-	-	42
Out	5	-	-	2	-	-	-	2	-	-	-	5	-	-	-	5	-	-	-	9	-	-	-	7	-	-	-	7	-	-	42

Footnotes:

(2) Increase in FY23 funding covers procurement costs of high priority installs scheduled for FY24/25. This includes items for Combat Systems, Strike Team (LCS Task Force), FRE Variant Electric Plant Improvement, and improvements to navigation safety. Applicable to both Freedom and Independence variant.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Modification Number / Title:** 2 / Combat System Lethality & Survivability Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	42.968	33.980	27.243	89.626	0.000	89.626	68.086	101.051	129.914	147.376	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	42.968	33.980	27.243	89.626	0.000	89.626	68.086	101.051	129.914	147.376	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**42.968**	**33.980**	**27.243**	**89.626**	**0.000**	**89.626**	**68.086**	**101.051**	**129.914**	**147.376**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

L&S funding will provide for hardware procurement and installation of a common Combat Management System (CMS) comprised of government furnished equipment, associated technical support data to upgrade the existing contractor furnished equipment, and associated cybersecurity modifications that will be back-fit onboard in-service LCS platforms. Funding will also provide for the non-recurring engineering to develop technical data packages and development of hardware and software packages necessary to integrate and test the common software baseline for two different LCS Class variants - Freedom and Independence. Production and planning support services for these upgrades are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis, with installation to be accomplished during planned CNO Availabilities. L&S plan upgrades the following systems to Government Furnished Equipment (GFE) resulting in one combat system baseline with a common Combat Management System (CMS): Total Ship Computing Environment (TSCE), MK-20 Electro-Optical Surveillance System, Surface Electronic Warfare Improvement Program, Nulka, MK-160 Gun Computer System, Data Links (IND only), Mode 5 IFF (IND only) and Navigation systems.

Installation costs across the FYDP vary depending on current port rates and install costs will be updated once an execution port is assigned. Port rates are updated every year by CNRMC based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. Due to the differences between the Independence and Freedom variant, installation costs will also vary between variants. Installation funding for a ship is divided over a three-year period: Installation execution funding in the year of availability, Design Service Allocation (DSA) two years prior to availability, and DSA in the year of the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Modification Number / Title:** 2 / Combat System Lethality & Survivability Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:** 0603581N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) TSCE - Freedom Variant - NonOrganic (3) *Installation 1 of 2*	1 / 1.344	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
1.1.2) MK 20 EOSS - NonOrganic *Installation 1 of 2*	1 / 2.015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
1.1.3) SEWIP Blk II Lite - NonOrganic *Installation 1 of 2*	1 / 5.158	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
1.1.4) MK 53 NULKA - NonOrganic *Installation 1 of 2*	1 / 1.469	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
1.1.5) MK 160 GFCS - NonOrganic *Installation 1 of 2*	1 / 2.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
2.1.1) TSCE - Independence Variant - NonOrganic (4) *Installation 2 of 2*	1 / 1.733	1 / 0.810	1 / 1.793	2 / 3.410	- / -	2 / 3.410	1 / 1.861	1 / 1.895	3 / 7.287	3 / 7.596	Continuing	Continuing
2.1.2) MK 20 EOSS - Organic(*)	- / 2.245	- / 1.331	- / 2.105	- / 4.441	- / -	- / 4.441	- / 2.311	- / 2.403	- / 8.996	- / 9.319	Continuing	Continuing
2.1.3) SEWIP Blk II Lite - Organic(*)	- / 5.785	- / 4.935	- / 5.263	- / 11.016	- / -	- / 11.016	- / 5.425	- / 6.123	- / 22.314	- / 23.120	Continuing	Continuing
2.1.4) MK 53 NULKA - Organic(*)	- / 1.637	- / 0.712	- / 1.518	- / 2.255	- / -	- / 2.255	- / 1.635	- / 1.638	- / 5.788	- / 6.554	Continuing	Continuing
2.1.5) CDLMS - Organic(*)	- / 3.614	- / 2.725	- / 3.251	- / 6.331	- / -	- / 6.331	- / 3.771	- / 4.893	- / 15.068	- / 16.609	Continuing	Continuing
2.1.6) MK 160 GFCS - Organic(*)	- / 2.225	- / 1.311	- / 2.053	- / 4.217	- / -	- / 4.217	- / 2.190	- / 3.489	- / 8.930	- / 9.103	Continuing	Continuing
2.1.7) UPX 29A - Organic(*)	- / 1.938	- / 1.020	- / 1.796	- / 3.084	- / -	- / 3.084	- / 1.851	- / 3.093	- / 7.971	- / 9.085	Continuing	Continuing
Subtotal: Procurement	*- / 31.388*	*- / 12.844*	*- / 17.779*	*- / 34.754*	*- / -*	*- / 34.754*	*- / 19.044*	*- / 23.534*	*- / 76.354*	*- / 81.386*	*Continuing*	*Continuing*
Installation												
Installation 1 of 2: GRP: Combat System Lethality & Survivability Upgrades - Freedom	- / 5.650	- / 2.822	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8.472
Installation 2 of 2: GRP: Combat System Lethality & Survivability Upgrades - Independence	- / 5.930	- / 18.314	- / 9.464	- / 54.872	- / 0.000	- / 54.872	- / 49.042	- / 77.517	- / 53.560	- / 65.990	- / 0.000	- / 334.689
Subtotal: Installation	*- / 11.580*	*- / 21.136*	*- / 9.464*	*- / 54.872*	*- / -*	*- / 54.872*	*- / 49.042*	*- / 77.517*	*- / 53.560*	*- / 65.990*	*- / 0.000*	*- / 343.161*
Total												
Total Cost (Procurement + Support + Installation)	**42.968**	**33.980**	**27.243**	**89.626**	**0.000**	**89.626**	**68.086**	**101.051**	**129.914**	**147.376**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Modification Number / Title:** 2 / Combat System Lethality & Survivability Upgrades

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: GRP: Combat System Lethality & Survivability Upgrades - Freedom

Manufacturer Information

Manufacturer Name: VARIOUS | Manufacturer Location: VARIOUS

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: CS L&S Upgrades:: Installation Name: Combat System Lethality & Survivability Upgrades - Freedom

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 5.650	0 / 2.822	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 8.472
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
Total	0 / 5.650	0 / 2.822	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 8.472

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Modification Number / Title:** 2 / Combat System Lethality & Survivability Upgrades

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: GRP: Combat System Lethality & Survivability Upgrades - Independence

Manufacturer Information

Manufacturer Name: VARIOUS | Manufacturer Location: VARIOUS

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	May 2022	May 2023	May 2024	May 2025	May 2026	May 2027	May 2028
Delivery Dates	Nov 2023	Nov 2024	Nov 2025	Nov 2026	Nov 2027	Nov 2028	Nov 2029

Installation Information

Method of Implementation: CS L&S Upgrades:: Installation Name: Combat System Lethality & Survivability Upgrades - Independence

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 5.930	0 / 9.698	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 15.628
FY 2022	- / -	0 / 8.616	0 / 5.954	1 / 40.333	0 / 0.000	1 / 40.333	- / -	- / -	- / -	- / -	0 / 0.000	1 / 54.903
FY 2023	- / -	- / -	0 / 3.510	0 / 6.119	0 / 0.000	0 / 6.119	1 / 33.316	- / -	- / -	- / -	0 / 0.000	1 / 42.945
FY 2024	- / -	- / -	- / -	0 / 8.420	0 / 0.000	0 / 8.420	0 / 11.776	2 / 67.572	- / -	- / -	0 / 0.000	2 / 87.768
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.950	0 / 5.920	1 / 35.476	- / -	0 / 0.000	1 / 45.346
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 4.025	0 / 6.043	1 / 36.262	0 / 0.000	1 / 46.330
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 12.041	0 / 17.395	3 / 0.000	3 / 29.436
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 12.333	3 / 0.000	3 / 12.333
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
Total	0 / 5.930	0 / 18.314	0 / 9.464	1 / 54.872	0 / 0.000	1 / 54.872	1 / 49.042	2 / 77.517	1 / 53.560	1 / 65.990	6 / 0.000	12 / 334.689

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	1	1	-	-	-	1	-	-	1	-	-	-	6	12
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	1	-	1	-	-	-	1	-	-	1	6	12

Footnotes:

(3) FY21 Freedom procurement will be utilized as a training asset due to Freedom variant decommissioning, thus no FY23 installation requirement.

(4) Installation costs across the FYDP vary depending on current port rates and install costs will be updated once an execution port is assigned. Port rates are updated every year by CNRMC based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1604 / LCS In-Service Modernization	**Modification Number / Title:** 2 / Combat System Lethality & Survivability Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

dependent upon the integration of ship's maintenance and modernization work packages. Due to the differences between the Independence and Freedom Classes, installation costs will also vary between variants. Installation funding for a ship is divided over a three-year period: Installation execution funding in the year of availability, and Design Service Allocation (DSA) two years prior to availability, and DSA in the year prior to the availability. This includes ship checks, ship installation drawing (SID) development, logistic document development and long lead time material procurements (LLTM). FY23 procurements leveraged on equitable ordering quantities via Participating Acquisition Resource Managers (PARMs) buys.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1611 / Small & Medium UUV

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0604218N, 0604028N	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	66.132	44.534	49.763	61.951	0.000	61.951	47.916	68.156	107.839	102.724	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	66.132	44.534	49.763	61.951	0.000	61.951	47.916	68.156	107.839	102.724	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**66.132**	**44.534**	**49.763**	**61.951**	**0.000**	**61.951**	**47.916**	**68.156**	**107.839**	**102.724**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	3.784	7.824	7.372	-	7.372	6.681	6.111	3.996	3.553	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Lionfish (Small UUV (SUUV)) is a 9" UUV and Viperfish (Medium Maritime Expeditionary Mine Countermeasures (MCM) UUV (MEMUUV)) is a 12.75" Unmanned Undersea Vehicle (UUV). MK 18 UUVs are employed in operational missions in Shallow Water (SW) and Very Shallow Water (VSW) environments including rotational deployments to the Fifth Fleet and Seventh Fleet areas of responsibility. These UUVs are a critical component of the ExMCM detect to engage sequence for undersea mine warfare. The UUVs can be launched from small boats, surface ships, submarines, or larger UUVs and recovered by surface ships and some submarines. Lionfish (SUUV) and Viperfish (Medium MEMUUV) UUVs will provide the warfighter battlespace awareness, Intelligence Preparation of the Operational Environment (IPOE), and Mine Warfare (MIW) capability.

Lionfish enables access to high threat areas in the maritime domain, expands access and reach into littorals and reduces risk to personnel / manned platforms. Provides enhanced situational awareness and access & placement.

P5 / 5N001 KNIFEFISH (SMCM UUV w/LFBB)]: The Knifefish Surface Mine Countermeasure Unmanned Undersea Vehicle (SMCM UUV) program procures Unmanned Undersea Vehicles to support clandestine mine detection capability against volume and bottom mines including buried mine detection. The Knifefish system is composed of two UUVs, batteries, launch and handling system, and other support equipment.

P5 / 5N100 Tetra: Tetra is a remotely operated vehicle (ROV) with the capacity for multiple mission payloads as the key enabler to Subsea and Seabed Warfare (SSW) as identified in the SSW Initial Capabilities Document
(ICD) signed March 2019. A single Tetra system is comprised of 2 ROVs equipped with a payload(s) and Ancillary Equipment.

[P40A / 5N200 Razorback]: Razorback is a medium class UUV capable of persistent, autonomous, ocean sensing and datacollection in support of Navy Intelligence Preparation of the Operational Environment (IPOE) for submarine missions. Razorback has two variants: the Dry Deck Shelter (DDS) variant and Torpedo Tube Launch and Recovery(TTL&R) variant.
Razorback Upgrades/Backfits provides for implementation of Engineering Change Proposals (ECPs) to correct design issues identified during system testing and to incorporate Fleet feedback.
Razorback Design Service Allocation (DSA) and Install provides for installation package generation and approval for submarine temporary alterations (TEMPALTs)(DDS and TTL&R), a temporary modification (TEMPMOD) (DDS), and two Razorback vehicles (DDS and TTL&R); and installation and removal (post mission) of TEMPALTs, TEMPMODs, and Razorback vehicles.
A single Dry Deck Shelter (DDS), Razorback install consists of two (2) Razorback vehicles and a DDS Submarine Support system.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1611 / Small & Medium UUV	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0604218N, 0604028N	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

A single Torpedo Tube Launch & Recovery (TTL&R) install consists of two (Razorback vehicles, two SAFECAPs, and TTL&R Submarine Support System. The Submarine Support System and Razorback vehicle installs are based on mission requirements. TEMPALT and TEMPMOD installation packages are required to support both SSGN and Virginia Class submarine installations.

[P5 / 5N001 KNIFEFISH (SMCM UUV w/LFBB)]: The Knifefish Surface Mine Countermeasure Unmanned Undersea Vehicle (SMCM UUV) program procures Unmanned Undersea Vehicles to support clandestine mine detection capability against volume and bottom mines including buried mine detection. The Knifefish system is composed of two UUVs, batteries, launch and handling system, and other support equipment.

Beginning in Fiscal Year (FY) 2020, Knifefish (SMCM UUV) was moved from OPN Line Item (LI) 2622 into OPN LI 1611.

[P5 / 5N220 MEDUSA]: Mining Expendable Deployed Unmanned Submarine Asset (MEDUSA) is a medium class UUV capable of offensive mining capabilities deployed from a submarine. MEDUSA features a torpedo tube launch capability, long range, high payload placement accuracy, and heavy payloads.

[P5 / 5N210 Razorback]: Razorback is a medium class UUV capable of persistent, autonomous, ocean sensing and data collection in support of Navy Intelligence Preparation of the Operational Environment (IPOE) for submarine missions. Razorback is broken out between Razorback TTL&R units, Razorback TTL&R Sub Support Systems. Razorback TTL&R units consist of Razorback vehicles and SAFECAPs. SAFECAP consists of operational and maintenance equipment required to safely ship, stow, and deploy a Razorback vehicle with lithium batteries from a submarine torpedo tube. Razorback TTL&R Sub Support Systems consist of operational and maintenance equipment including submarine modification kits for TTL&R operations.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	**P-1 Line Item Number / Title:** 1611 / Small & Medium UUV

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0604218N, 0604028N	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40a	Small & Medium UUV				- / 18.582	- / 5.725	- / 10.306	- / 16.120	- / -	- / 16.120
P-5	1 / Small & Medium UUV	P-5a, P-21			- / 47.550	- / 38.809	- / 39.457	- / 45.831	- / 0.000	- / 45.831
P-40	**Total Gross/Weapon System Cost**				**- / 66.132**	**- / 44.534**	**- / 49.763**	**- / 61.951**	**- / 0.000**	**- / 61.951**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2024 funding is required for additional procurement of the next generation of Small Class Unmanned Undersea Vehicles (Lionfish) along with procurement of Mission Support Equipment for the Lionfish systems. FY24 funding is also required to continue procurement of various MK18 Advanced Sensor Packages and retrofits kits.

CE 2.1.5 MK 18 Advanced Sensor Package (FLS): Procurement qtys increased from 0 units in FY23 to 11 units in FY 24 in support of Expeditionary Mine Countermeasures missions in 5th and 7th Fleets.

CE 3.1.1 LIONFISH (SUUV): Procurement qtys increased from 10 units in FY23 to 13 units in FY24 in support of EOD ExMCM growth. These additional UUVs ensure ExMCM companies will be outfitted with UUVs. Without this increase ExMCM companies will not have UUVs in order to conduct their primary mission of expeditionary mine countermeasures.

Razorback FY24 increase supports new Razorback communications upgrades Assured Beyond Line of Sight (ABLOS) and Compact Mobile User Objective System (MUOS) as well as productionization of Front End systems and Shock and Fire Enclosure Capsules (SAFECAPs).

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1611 / Small & Medium UUV	**Aggregated Items Title:** Small & Medium UUV

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) 5N200 Razorback																				
1.1) Razorback Upgrades/Backfits	A		-	-	1.823	-	-	0.953	-	-	0.981	-	-	6.555	-	-	-	-	-	6.555
1.2) Razorback Production Support	A		-	-	-	-	-	-	-	-	1.182	-	-	1.218	-	-	-	-	-	1.218
1.3) FMP - Razorback DSA	A		-	-	-	-	-	-	-	-	1.972	-	-	1.916	-	-	-	-	-	1.916
1.4) FMP - Razorback Install	A		-	-	-	-	-	-	-	-	6.171	-	-	6.431	-	-	-	-	-	6.431
Subtotal: 1) 5N200 Razorback			**-**	**-**	***1.823***	**-**	**-**	***0.953***	**-**	**-**	***10.306***	**-**	**-**	***16.120***	**-**	**-**	**-**	**-**	**-**	***16.120***
2) Razorback Production Support																				
2.1) Razorback	A		-	-	2.196	-	-	1.146	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) Razorback Production Support			**-**	**-**	***2.196***	**-**	**-**	***1.146***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) FMP																				
3.1) Razorback DSA	A		-	-	5.195	-	-	1.537	-	-	-	-	-	-	-	-	-	-	-	-
3.2) Razorback Install	A		-	-	9.368	-	-	2.089	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) FMP			**-**	**-**	***14.563***	**-**	**-**	***3.626***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**18.582**	**-**	**-**	**5.725**	**-**	**-**	**10.306**	**-**	**-**	**16.120**	**-**	**-**	**-**	**-**	**-**	**16.120**

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1611 / Small & Medium UUV	**Item Number / Title [DODIC]:** 1 / Small & Medium UUV
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	47.550	38.809	39.457	45.831	0.000	45.831
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	47.550	38.809	39.457	45.831	0.000	45.831
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**47.550**	**38.809**	**39.457**	**45.831**	**0.000**	**45.831**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Hardware - 5N001 KNIFEFISH (SMCM UUV w/LFBB) Cost																		
Recurring Cost																		
1.1.1) Knifefish Retrofit Kits	-	-	13.250	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*13.250*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Non Recurring Cost																		
1.2.1) Production Engineering	-	-	1.750	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	*1.750*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - 5N001 KNIFEFISH (SMCM UUV w/ LFBB) Cost	**-**	**-**	***15.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - 5N200 MK 18 UUV FAMILY OF SYSTEMS Cost																		
Recurring Cost																		
2.1.1) MK 18 MOD 2 UUV(†) (1)	1,711K	9	15.402	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) MK 18 Auxiliary & Mission Support Equipment(†) (2)	381,545.45	11	4.197	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.3) MK 18 MOD 2 Advanced Sensor Kits (SSAM)(†) (3)	615,000.00	6	3.690	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1611 / Small & Medium UUV	Item Number / Title [DODIC]: 1 / Small & Medium UUV
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
2.1.4) MK 18 MOD 2 Advanced Sensor Kits (ATLAS)(†) (4)	425,000.00	5	2.125	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.5) MK 18 Advanced Sensor Package (FLS)(†) (5)	-	-	0.000	1,080K	10	10.800	-	-	0.000	883,320.00	11	9.717	-	-	0.000	883,320.00	11	9.717
2.1.6) MK 18 Advanced Sensor Package (SAS)(†) (6)	-	-	0.000	1,612K	4	6.448	1,612K	5	8.060	-	-	0.000	-	-	0.000	-	-	0.000
2.1.7) MK 18 Advanced Sensor Package (VCM Kits)(†) (7)	-	-	0.000	150,000.00	18	2.700	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.8) MK 18 MOD 2 Retrofit Kits (Inc II)(†) (8)	1,258K	2	2.517	1,258K	3	3.775	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.9) MK 18 Family of Systems Production Engineering (9)	-	-	1.673	-	-	1.145	-	-	1.621	-	-	1.375	-	-	0.000	-	-	1.375
2.1.10) MK 18 MOD FoS OCO Reset (10)	-	-	2.946	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.11) MK18 Advanced Sensors Package Commercialization Transition Maturation (11)	-	-	0.000	-	-	3.224	-	-	1.612	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*32.550*	-	-	*28.092*	-	-	*11.293*	-	-	*11.092*	-	-	*0.000*	-	-	*11.092*
Subtotal: Hardware - 5N200 MK 18 UUV FAMILY OF SYSTEMS Cost	**-**	**-**	***32.550***	**-**	**-**	***28.092***	**-**	**-**	***11.293***	**-**	**-**	***11.092***	**-**	**-**	***0.000***	**-**	**-**	***11.092***
Hardware - 5N300 MARITIME EXPEDITIONARY MCM UUV Cost																		
Recurring Cost																		
3.1.1) LIONFISH (SUUV)(†) (12)	-	-	0.000	-	-	0.000	1,428K	10	14.280	1,456K	13	18.934	-	-	0.000	1,456K	13	18.934
3.1.5) LIONFISH MSE(†) (13)	-	-	0.000	-	-	0.000	564,000.00	4	2.256	556,000.00	3	1.668	-	-	0.000	556,000.00	3	1.668
3.1.7) MEMUUV Production Engineering (14)	-	-	0.000	-	-	0.000	-	-	1.066	-	-	1.427	-	-	0.000	-	-	1.427

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1611 / Small & Medium UUV	Item Number / Title [DODIC]: 1 / Small & Medium UUV
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
3.1.8) MEMUUV Initial Training (15)	-	-	0.000	-	-	0.000	-	-	1.316	-	-	0.930	-	-	0.000	-	-	0.930
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*18.918*	-	-	*22.959*	-	-	*0.000*	-	-	*22.959*
Subtotal: Hardware - 5N300 MARITIME EXPEDITIONARY MCM UUV Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***18.918***	**-**	**-**	***22.959***	**-**	**-**	***0.000***	**-**	**-**	***22.959***
Hardware - 5N004 NAVAL SPECIAL WARFARE FORCES MK18 UUV Cost																		
Recurring Cost																		
4.1.2) SUPPORT EQUIPMENT (16)	-	-	0.000	-	-	0.039	-	-	1.081	-	-	0.115	-	-	0.000	-	-	0.115
4.1.3) NSW LIONFISH(†) (17)	-	-	0.000	1,436K	5	7.178	1,428K	2	2.856	1,456K	3	4.368	-	-	0.000	1,456K	3	4.368
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*7.217*	-	-	*3.937*	-	-	*4.483*	-	-	*0.000*	-	-	*4.483*
Subtotal: Hardware - 5N004 NAVAL SPECIAL WARFARE FORCES MK18 UUV Cost	**-**	**-**	***0.000***	**-**	**-**	***7.217***	**-**	**-**	***3.937***	**-**	**-**	***4.483***	**-**	**-**	***0.000***	**-**	**-**	***4.483***
Hardware - 5N100 Tetra Cost																		
Recurring Cost																		
5.1.1) Tetra - Remotely Operated Vehicle (ROV)(†) (18)	-	-	0.000	825,000.00	1	0.825	1,248K	2	2.496	1,311K	3	3.933	-	-	0.000	1,311K	3	3.933
5.1.2) Ancillary Equipment Kit- Tetra(†) (19)	-	-	0.000	1,210K	1	1.210	1,601K	1	1.601	1,682K	2	3.364	-	-	0.000	1,682K	2	3.364
5.1.3) Payload Integration - Tetra(†) (20)	-	-	0.000	-	-	1.465	202,000.00	6	1.212	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*3.500*	-	-	*5.309*	-	-	*7.297*	-	-	*0.000*	-	-	*7.297*
Subtotal: Hardware - 5N100 Tetra Cost	**-**	**-**	***0.000***	**-**	**-**	***3.500***	**-**	**-**	***5.309***	**-**	**-**	***7.297***	**-**	**-**	***0.000***	**-**	**-**	***7.297***
Gross/Weapon System Cost	**-**	**-**	**47.550**	**-**	**-**	**38.809**	**-**	**-**	**39.457**	**-**	**-**	**45.831**	**-**	**-**	**0.000**	**-**	**-**	**45.831**

Remarks:
[Hardware] Beginning in FY21 and continuing across the FYDP, funding previously included in OPN LI 0977 for procurement of Expeditionary Mine Countermeasures (ExMCM), Unmanned Undersea Vehicles (UUVs) is now included in the Small And Medium Class UUV OPN LI 1611. MK18 FOS enables expeditionary forces to conduct mine countermeasure operations from various platforms.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1611 / Small & Medium UUV	Item Number / Title [DODIC]: 1 / Small & Medium UUV
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

[Hardware] In FY22, Tetra transitions from the N94 Rapid Prototyping Experimentation and Demonstration (RPED) effort under PE0604030N to a program of record (PoR)

(†) indicates the presence of a P-5a

Footnotes:

(1) CE 2.1.1 MK 18 MOD 2 UUV: Provides for procurement of MK 18 Mod 2 UUVs which will be employed in operational missions in Shallow Water (SW) and Very Shallow Water (VSW) environments including GFM deployments of Expeditionary MCM (ExMCM) Companies ISO C5F and C7F. These UUVs are a critical component of the ExMCM detect to engage sequence for undersea mines. This procurement supports the capacity growth of the Navy's Expeditionary MCM force to 16 companies over the FYDP. These MK 18 Mod 2 UUVs will outfit companies 9-12.

(2) CE 2.1.2 ExMCM AUXILIARY, SUPPORT, MAINTENANCE, and MISSION SUPPORT EQUIPMENT KITS: The ExMCM Aux Kits includes equipment required for ExMCM deployment, pre-mission planning and post mission analysis. Items include equipment required to deploy the ExMCM equipment such as transport carts, transport cases, test equipment, pre-mission planning equipment not covered in the support or maintenance kits. The ExMCM Support Kit comprises GETACs, Post-Mission Analysis (PMA) stations, cross-domain modules, and other support items that comprise a portion of the ExMCM system outfitting. The Maintenance Kit comprises special tool kits, calibration equipment, fly away maintenance modules, and other maintenance items.

(3) CE 2.1.3 MK18 MOD 2 ADVANCED SENSOR KITS (SMALL SYNTHETIC APERTURE MINEHUNTER (SSAM) SONAR): Provides for procurement of MK 18 Mod 2 UUV Advanced sensor retrofit kits, which will be employed in operational missions in Shallow Water (SW) and Very Shallow Water (VSW) environments including GFM deployments of Expeditionary MCM Companies ISO C5F and C7F. These SSAM retrofit kits add advanced sensor capability to the MK18 Mod 2 which increases area coverage rate and resolution of side scan sonar images of the sea floor which decreases the detect to engage timeline for Expeditionary MCM companies to enable rapid Fleet Maneuver against near peer adversaries.

(4) CE 2.1.4 MK18 MOD 2 ADVANCED SENSOR KITS (ATLAS FORWARD LOOK SONAR): Provides for procurement of UUV MK 18 Mod 2 retrofit kits, which will be employed in operational missions in Shallow Water (SW) and Very Shallow Water (VSW) environments including GFM deployments of Expeditionary MCM Companies ISO C5F and C7F. These ATLAS retrofit kits add advanced sensor capability to the MK 18 Mod 2 system, specifically the ability to detect sea mines and other hazards in the volume of water (vice the sea floor) to enable rapid Fleet Maneuver against near peer adversaries.

(5) CE 2.1.5 MK 18 Advanced Sensor Package (FLS): Provides for procurement of MK 18 Advanced Sensor Package (Forward Look Sonar), which will be employed in support of Expeditionary Mine Countermeasures. Capabilities include obstacle avoidance, volume target detection and intelligence preparation of the environment (IPOE) missions in 5th, 6th and 7th Fleets. The ASP (FLS) is a modernized GOTS version of the ATLAS sensor. Unit cost increase incurred transitioning engineering development models to production articles. Economic ordering quantities employed to the maximum extent possible for cost reduction.

(6) CE 2.1.6 MK 18 Advanced Sensor Package (SAS): Provides for procurement of MK 18 Advanced Sensor Package Synthetic Aperture Sonar (SAS), which will be employed in support of Expeditionary Mine Countermeasures missions in 5th and 7th Fleets to provide significantly increased detection and localization capabilities in complex bottom conditions and will provide target identification capability at safe standoff ranges. PMS 408 received $10M in FY22 funding from OSD's "accelerate the procurement and fielding of innovative technologies" (APFIT) pilot program. These funds procured (6) additional SSAM sensors for MK 18 Mod 2, and 18 VCM kits for Lionfish, which will support ExMCM Companies in 5th and 7th Fleets (APFIT funding and quantities not reflected in this budget exhibit). APFIT funds will support the current SSAM procurement plan to field 24 modules to ExMCM Companies 1-12. Additional funds to complete outfitting are required.

(7) CE 2.1.7 MK 18 Advanced Sensor Package (Visual Automatic Target Recognition (V-ATR) Common Module (VCM) Kits): Provides for procurement of MK 18 Advanced Sensor VCM Kit, which will provide a capability to significantly decrease tactical timelines to detect and engage through embedded ATR and sonar gap-fill capabilities. Unit cost increases are based on contract step ladder pricing.

(8) CE 2.1.8 MK 18 MOD 2 RETROFIT KITS (INCREMENT II): Provides for procurement of UUV MK 18 Mod 2 retrofit Inc II kits, which will be employed in operational missions in Shallow Water (SW) and Very Shallow Water (VSW) environments including GFM deployments of Expeditionary MCM Companies. These retrofit kits add capability that improves reliability, autonomous features, and automated target recognition capabilities. This upgrade kit reduces the detect to engage timeline for Expeditionary MCM Companies to enable Fleet Maneuver against near peer adversaries.

(9) CE 2.1.9 MK 18 Family of Systems Production Engineering: Funding supports the production of MK 18 Mod 2 Increment II and Advanced Sensor Packages requiring additional production support to include production contract award, first article test, factory acceptance tests and government acceptance testing. This line enables the rapid and seamless transition from development to production, which is critical to the schedule for delivery of these Expeditionary MCM UUVs.

(10) CE 2.1.10 MK18 FAMILY OF SYSTEMS (FoS) RESET: Reset funding for replacement of UUV losses that occurred during fleet operations in support of COMNAVCENT missions. OCO resources will restore forces to full operational readiness to meet C5F mission needs.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1611 / Small & Medium UUV	Item Number / Title [DODIC]: 1 / Small & Medium UUV
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

(11) CE 2.1.11 MK18 Advanced Sensors Package Commercialization Transition Maturation: In FY22, funding was provided for costs incurred for Advanced Sensor Payloads to include maturation of technical data package; commercialization of technology and Technical Data Package (TDP) from UARC to industrial partner; and standup of production capabilities. FY23 funding reflects continuing TDP and commercialization efforts that will wind down and shift focus to the manufacturing process.

(12) CE 3.1.1 LIONFISH (SUUV): These resources procure the next generation of small class of the Maritime Expeditionary MCM UUV as a follow-on to the legacy MK 18 Mod 1 UUV. They will be based on a modified Off-the-Shelf commercial design with modernized sub-systems and enhanced capabilities. This procurement supports the capacity growth of the Navy's Expeditionary MCM force to 16 companies over the FYDP. These Small UUVs will outfit companies 13-16. Production begins in FY23. These UUVs ensure ExMCM companies will be outfitted with UUVs in order to conduct their primary mission of expeditionary mine countermeasures.

(13) CE 3.1.5 LIONFISH MSE: These resources procure the Mission Support Equipment (MSE) for the Small Maritime Expeditionary MCM UUV family of systems. The requisite MSE includes, but is not limited to, shipboard charging containers and specifically outfitted UUV maintenance support shelter. Funding provided in FY24 for additional procurements of MSE for Small Maritime exMCM UUV Family of Systems to meet Fleet inventory objectives.

(14) CE 3.1.7 MEMUUV Production Engineering: Funding supports the increased production of MEMUUV family of systems requiring additional production support to include production contract award, first article test, factory acceptance tests and government acceptance testing. This line enables the rapid and seamless transition from development to production, which is critical to the schedule for delivery of these Expeditionary MCM UUVs. The Navy's Expeditionary MCM Capacity is growing to 16 companies over the course of the FYDP which requires additional and accelerated production of equipment by industry and government partners. In FY24, Additional funding required to support increased procurement of Lionfish systems. Funding will also be required for support of Advanced Sensor Packages to include Forward Looking Sonar (FLS) and Synthetic Aperture Sonar (SAS).

(15) CE 3.1.8 MEMUUV INITIAL TRAINING: Funding provides resources needed due to the increase in training requirements due to fielding of new systems and incremental upgrades to existing systems. This training is required based on execution of acquisition programs.

(16) FY24 Funding supports partial procurement of support equipment.

(17) FY24 NSW will procure three LIONFISH SUUV and support equipment. In FY22, program of record changed from MK18 MOD 1 to Lionfish. In FY23, TOA increased FOC from 7 to 17 systems (3 vehicles per system) requiring procurement of 2 systems per year. Resource constraining limited funding to 1 system per year.

(18) FY22 costs include building the initial Tetra EDM. Change in procurement unit costs from last budget submit is based on new Top-Level Requirements from N97 sponsor and refined designs following Critical Design Review (CDR) conducted in December 2022.

(19) Tetra Ancillary Equipment Kits include (5) vehicle fiber packs, (2) launchers, (3) launcher fiber packs, (1) Control and Display Console(C&DC), and (1) stowage pallet.

(20) A single Tetra system is comprised of 2 ROVs equipped with a payload(s) and Ancillary Equipment.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1611 / Small & Medium UUV	Item Number / Title [DODIC]: 1 / Small & Medium UUV

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.1) MK 18 MOD 2 UUV(†)		2021	VARIOUS / VARIOUS	C / FFP	NSWCIH, MD	Nov 2020	Nov 2021	9	1,711K	Y		
2.1.2) MK 18 Auxiliary & Mission Support Equipment(†)		2021	VARIOUS / VARIOUS	C / FFP	NSWCIH, MD	Mar 2021	Mar 2022	11	381,500.00	Y		
2.1.3) MK 18 MOD 2 Advanced Sensor Kits (SSAM)(†)		2021	VARIOUS / VARIOUS	C / FFP	NIWC PAC	Jan 2021	Jan 2022	6	615,000.00	Y		
2.1.4) MK 18 MOD 2 Advanced Sensor Kits (ATLAS)(†)		2021	VARIOUS / VARIOUS	C / FFP	NIWC PAC	Apr 2021	Apr 2022	5	425,000.00	Y		
2.1.5) MK 18 Advanced Sensor Package (FLS)(†)		2022	Naval Information Warfare Center (NIWC) Pacific / San Diego, CA	Various	NIWC PAC	Nov 2021	Sep 2022	10	1,080K	Y		
2.1.5) MK 18 Advanced Sensor Package (FLS)(†)		2024	Naval Information Warfare Center (NIWC) Pacific / San Diego, CA	C / TBD	NIWC PAC	Nov 2023	Sep 2024	11	883,320.00	N	Sep 2024	
2.1.6) MK 18 Advanced Sensor Package (SAS)(†)		2022	NIW PAC / San Diego	Various	NIWC PAC	Nov 2021	Oct 2022	4	1,612K	Y		
2.1.6) MK 18 Advanced Sensor Package (SAS)(†)		2023	NIW PAC / San Diego	Various	NIWC PAC	Nov 2022	Oct 2023	5	1,612K	N	Oct 2023	
2.1.7) MK 18 Advanced Sensor Package (VCM Kits)(†)		2022	NIW PAC / San Diego	Various	NIWC PAC	Nov 2021	Aug 2022	18	150,000.00	Y		
2.1.8) MK 18 MOD 2 Retrofit Kits (Inc II)(†)		2021	HYDROID / POCASSET, MA	C / FFP	NUWC NPT	Mar 2021	Mar 2022	2	1,258K	Y		
2.1.8) MK 18 MOD 2 Retrofit Kits (Inc II)(†)		2022	HYDROID / POCASSET, MA	C / FFP	NUWC NPT	Mar 2022	Mar 2023	3	1,258K	Y		
3.1.1) LIONFISH (SUUV)(†)		2023	VARIOIUS / VARIOUS	Various	** NO PCO **	Nov 2022	Nov 2023	10	1,428K	N	Nov 2023	
3.1.1) LIONFISH (SUUV)(†)		2024	VARIOIUS / VARIOUS	Various	** NO PCO **	Nov 2023	Nov 2024	13	1,456K	N	Nov 2024	
3.1.5) LIONFISH MSE(†)		2023	VARIOUS / VARIOUS	Various	** NO PCO **	Nov 2022	Nov 2023	4	564,000.00	N	Nov 2023	
3.1.5) LIONFISH MSE(†)		2024	VARIOUS / VARIOUS	Various	** NO PCO **	Nov 2023	Nov 2024	3	556,000.00	N	Nov 2024	
4.1.3) NSW LIONFISH(†)		2022	Hydroid, Inc / MA	MIPR	** NO PCO **	May 2022	May 2023	5	1,436K	N		
4.1.3) NSW LIONFISH(†)		2023	Hydroid, Inc / MA	C / FFP	** NO PCO **	Mar 2023	Mar 2024	2	1,428K	N		
4.1.3) NSW LIONFISH(†)		2024	Hydroid, Inc / MA	C / FFP	** NO PCO **	Mar 2024	Mar 2025	3	1,456K	N		
5.1.1) Tetra - Remotely Operated Vehicle (ROV)		2022	Oceaneering / Hanover, MD	Various	** NO PCO **	Jul 2022	Sep 2022	1	825,000.00	Y		Jul 2021
5.1.1) Tetra - Remotely Operated Vehicle (ROV)		2023	Oceaneering / Hanover, MD	Various	** NO PCO **	Mar 2023	Dec 2024	2	1,248K	Y		Dec 2022
5.1.1) Tetra - Remotely Operated Vehicle (ROV)		2024	Oceaneering / Hanover, MD	Various	** NO PCO **	Jan 2024	Dec 2025	3	1,311K	Y		Dec 2023

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1611 / Small & Medium UUV	Item Number / Title [DODIC]: 1 / Small & Medium UUV

Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost ($)	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.1.2) Ancillary Equipment Kit-Tetra		2022	Oceaneering / Hanover, MD	Various	** NO PCO **	Jul 2022	Sep 2022	1	1,210K	Y		Jul 2021
5.1.2) Ancillary Equipment Kit-Tetra		2023	Oceaneering / Hanover, MD	Various	** NO PCO **	Mar 2023	Dec 2024	1	1,601K	Y		Dec 2022
5.1.2) Ancillary Equipment Kit-Tetra		2024	Oceaneering / Hanover, MD	Various	** NO PCO **	Jan 2024	Dec 2025	2	1,682K	Y		Dec 2023
5.1.3) Payload Integration - Tetra		2023	Applied Research Lab / Austin, Tx	Various	** NO PCO **	Mar 2023	Dec 2024	6	202,000.00	Y		Jan 2023

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 | **P-1 Line Item Number / Title:** 1611 / Small & Medium UUV | **Item Number / Title [DODIC]:** 1 / Small & Medium UUV

Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) MK 18 MOD 2 UUV (1)																															
	1	2021	NAVY	9	0	9		A -	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	3					0
2.1.2) MK 18 Auxiliary & Mission Support Equipment (2)																															
	2	2021	NAVY	11	0	11						A -	-	-	-	-	-	-	-	-	-	-	-	11							0
2.1.3) MK 18 MOD 2 Advanced Sensor Kits (SSAM) (3)																															
	3	2021	NAVY	6	0	6				A -	-	-	-	-	-	-	-	-	-	-	-	6									0
2.1.4) MK 18 MOD 2 Advanced Sensor Kits (ATLAS) (4)																															
	4	2021	NAVY	5	0	5							A -	-	-	-	-	-	-	-	-	-	-	-	5						0
2.1.5) MK 18 Advanced Sensor Package (FLS) (5)																															
	5	2022	NAVY	10	0	10														A -	-	-	-	-	-	-	-	-	-	10	0
	5	2024	NAVY	11	0	11																									11
2.1.6) MK 18 Advanced Sensor Package (SAS) (6)																															
	6	2022	NAVY	4	0	4														A -	-	-	-	-	-	-	-	-	-	-	4
	6	2023	NAVY	5	0	5																									5
2.1.7) MK 18 Advanced Sensor Package (VCM Kits) (7)																															
	7	2022	NAVY	18	0	18														A -	-	-	-	-	-	-	-	-	18		0
2.1.8) MK 18 MOD 2 Retrofit Kits (Inc II) (8)																															
	8	2021	NAVY	2	0	2						A -	-	-	-	-	-	-	-	-	-	-	-	2							0
	8	2022	NAVY	3	0	3																		A -	-	-	-	-	-	-	3
3.1.1) LIONFISH (SUUV) (12)																															
	9	2023	NAVY	10	0	10																									10
	9	2024	NAVY	13	0	13																									13
3.1.5) LIONFISH MSE (13)																															
	10	2023	NAVY	4	0	4																									4
	10	2024	NAVY	3	0	3																									3
4.1.3) NSW LIONFISH (17)																															
	11	2022	NAVY	5	0	5																				A -	-	-	-	-	5
	11	2023	NAVY	2	0	2																									2
	11	2024	NAVY	3	0	3																									3
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 | **P-1 Line Item Number / Title:** 1611 / Small & Medium UUV | **Item Number / Title [DODIC]:** 1 / Small & Medium UUV

Cost Elements (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
							Calendar Year 2023												Calendar Year 2024												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) MK 18 MOD 2 UUV (1)																															
	1	2021	NAVY	9	9	0																									0
2.1.2) MK 18 Auxiliary & Mission Support Equipment (2)																															
	2	2021	NAVY	11	11	0																									0
2.1.3) MK 18 MOD 2 Advanced Sensor Kits (SSAM) (3)																															
	3	2021	NAVY	6	6	0																									0
2.1.4) MK 18 MOD 2 Advanced Sensor Kits (ATLAS) (4)																															
	4	2021	NAVY	5	5	0																									0
2.1.5) MK 18 Advanced Sensor Package (FLS) (5)																															
	5	2022	NAVY	10	10	0																									0
	5	2024	NAVY	11	0	11														A -	-	-	-	-	-	-	-	-	-	11	0
2.1.6) MK 18 Advanced Sensor Package (SAS) (6)																															
	6	2022	NAVY	4	0	4	2	1	-	-	1																				0
	6	2023	NAVY	5	0	5		A -	-	-	-	-	-	-	-	-	-	-	2	1	1	-	1								0
2.1.7) MK 18 Advanced Sensor Package (VCM Kits) (7)																															
	7	2022	NAVY	18	18	0																									0
2.1.8) MK 18 MOD 2 Retrofit Kits (Inc II) (8)																															
	8	2021	NAVY	2	2	0																									0
	8	2022	NAVY	3	0	3	-	-	-	-	-	3																			0
3.1.1) LIONFISH (SUUV) (12)																															
	9	2023	NAVY	10	0	10		A -	-	-	-	-	-	-	-	-	-	-	-	10											0
	9	2024	NAVY	13	0	13														A -	-	-	-	-	-	-	-	-	-	-	13
3.1.5) LIONFISH MSE (13)																															
	10	2023	NAVY	4	0	4		A -	-	-	-	-	-	-	-	-	-	-	-	4											0
	10	2024	NAVY	3	0	3														A -	-	-	-	-	-	-	-	-	-	-	3
4.1.3) NSW LIONFISH (17)																															
	11	2022	NAVY	5	0	5	-	-	-	-	-	-	-	5																	0
	11	2023	NAVY	2	0	2						A -	-	-	-	-	-	-	-	-	-	-	-	2							0
	11	2024	NAVY	3	0	3																		A -	-	-	-	-	-	-	3
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1611 / Small & Medium UUV	**Item Number / Title [DODIC]:** 1 / Small & Medium UUV

Cost Elements (Units in Each)							Fiscal Year 2025												Fiscal Year 2026												BALANCE
										Calendar Year 2025												Calendar Year 2026									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.1) MK 18 MOD 2 UUV (1)																															
	1	2021	NAVY	9	9	0																									0
2.1.2) MK 18 Auxiliary & Mission Support Equipment (2)																															
	2	2021	NAVY	11	11	0																									0
2.1.3) MK 18 MOD 2 Advanced Sensor Kits (SSAM) (3)																															
	3	2021	NAVY	6	6	0																									0
2.1.4) MK 18 MOD 2 Advanced Sensor Kits (ATLAS) (4)																															
	4	2021	NAVY	5	5	0																									0
2.1.5) MK 18 Advanced Sensor Package (FLS) (5)																															
	5	2022	NAVY	10	10	0																									0
	5	2024	NAVY	11	11	0																									0
2.1.6) MK 18 Advanced Sensor Package (SAS) (6)																															
	6	2022	NAVY	4	4	0																									0
	6	2023	NAVY	5	5	0																									0
2.1.7) MK 18 Advanced Sensor Package (VCM Kits) (7)																															
	7	2022	NAVY	18	18	0																									0
2.1.8) MK 18 MOD 2 Retrofit Kits (Inc II) (8)																															
	8	2021	NAVY	2	2	0																									0
	8	2022	NAVY	3	3	0																									0
3.1.1) LIONFISH (SUUV) (12)																															
	9	2023	NAVY	10	10	0																									0
	9	2024	NAVY	13	0	13	-	13																							0
3.1.5) LIONFISH MSE (13)																															
	10	2023	NAVY	4	4	0																									0
	10	2024	NAVY	3	0	3	-	3																							0
4.1.3) NSW LIONFISH (17)																															
	11	2022	NAVY	5	5	0																									0
	11	2023	NAVY	2	2	0																									0
	11	2024	NAVY	3	0	3	-	-	-	-	-	3																			0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	**P-1 Line Item Number / Title:** 1611 / Small & Medium UUV	**Item Number / Title [DODIC]:** 1 / Small & Medium UUV

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	VARIOUS - VARIOUS			TBD	0	0	0	0	0	0	0	0
2	VARIOUS - VARIOUS			TBD	0	0	0	0	0	0	0	0
3	VARIOUS - VARIOUS			TBD	0	0	0	0	0	0	0	0
4	VARIOUS - VARIOUS			TBD	0	0	0	0	0	0	0	0
5	Naval Information Warfare Center (NIWC) Pacific - San Diego, CA			TBD	0	0	0	0	0	0	0	0
6	NIW PAC - San Diego			TBD	0	0	0	0	0	0	0	0
7	NIW PAC - San Diego			TBD	0	0	0	0	0	0	0	0
8	HYDROID - POCASSET, MA			TBD	0	0	0	0	0	0	0	0
9	VARIOIUS - VARIOUS			TBD	0	0	0	0	0	0	0	0
10	VARIOUS - VARIOUS			TBD	0	0	0	0	0	0	0	0
11	Hydroid, Inc - MA	1	3	3	12	0	0	0	12	0	12	12

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 16: Logistic Support	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	760.333	0.000	0.000	7.594	0.000	7.594	17.667	25.346	0.000	0.000	-	810.940
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	760.333	0.000	0.000	7.594	0.000	7.594	17.667	25.346	0.000	0.000	-	810.940
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**760.333**	**0.000**	**0.000**	**7.594**	**0.000**	**7.594**	**17.667**	**25.346**	**0.000**	**0.000**	**-**	**810.940**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program is a new start in FY 2024.
Modernized LSD 41/49 Class ships transport and launch amphibious craft and vehicles with their crews and embarked personnel in amphibious assault operations. Supporting amphibious operations include landings via Landing Craft, Air Cushion (LCAC), conventional landing craft, and helicopters, onto hostile shores.

[P40A / ST003 LSD Hull, Mechanical and Electrical Condition System]: The LSD Hull, Mechanical and Electrical (HM&E) Condition System implements HM&E principles and would implement a Defense-in-Depth Functional Implementation Architecture (DFIA) and meet the requirements of the standards released by the Information Assurance Technical Authority Board (IA TAB) across all the HM&E systems deploying the ability to protect, detect, react, and restore in a contested environment. The HM&E Condition System will monitor the signals on the HM&E network, both between HM&E systems and also those coming from other functional domains.

[P40A / ST002 - Propeller Blades & PLMU]: This SHIPALT replaces the existing Propeller Blades with higher efficiency blades and installs Propulsion Load Management Units (PLMU) that result in fuel savings and engine maintenance reduction as well as operational
benefits. Only 9 LSDs will require this SHIPALT as part of the Midlife Program.

[P40A / ST002 - Generators & Elect Distribution]: This SHIPALT replaces the generator on the Ship Service Diesel Generators (SSDG) with a higher wattage version and increased electric distribution capability for shore power, switchboard and load centers. This SHIPALT provides significant Return on Investment (ROI) through improved reliability and maintainability of electrical ship systems/equipment versus the obsolete and maintenance intensive equipment. Also, additional electrical plant loads will improve efficient operation of the currently under-loaded SSDGs and contribute to the ROI through reduced maintenance costs for the SSDGs.

[P40A / ST002 - Low Pressure Air Compressor]: This Ship Change replaces the Low-Pressure Air Compressors (LPAC) with modern, oil-free compressors. Parts obsolescence is a rapidly growing and more costly problem on these maintenance intensive compressors. This Ship Change provides Return On Investment (ROI) through improved reliability and maintainability of LPACs and reduced maintenance by elimination of oil contamination of pneumatic controls components (new compressors are oil free). In addition, the new compressors will provide significant readiness improvement through increased reliability of Vital, low-pressure air supply to Vital combat systems and the main propulsion controls.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 16: Logistic Support	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

[P40A / ST002 - Steering Control System]: This SHIPALT replaces the analog Helm and Lee Helm Steering Consoles and equipment with an electronic, computerized Steering Control System (SCS) that integrates various navigation parameters, such as location (latitude, longitude) from GPS as well as pitch, roll, speed, heading, and wind. SCS will be designed to integrate with Electronic Chart Display and Information Systems-Navy (ECDIS-N) digital nautical charts. The existing Bridge control system was designed in the late 1970s and is near the end of its useful service life. Parts obsolescence is a rapidly growing and costlier problem on this maintenance intensive control system. The IBS also provides significantly enhanced operational and monitoring capabilities as well as real-time Navigation data. This system will reduce workload, provide significant readiness improvement, improve safety and provide cost avoidance.

[P3A / ST002 - LSD Flight Deck Thermal Management System]: Provides Flight Deck Thermal Management System (FDTMS) on the flight deck to mitigate damage resulting from MV-22 vertical take off/landing (VTOL) flight operations.

[P3A - 2 / ST002 - LSD Ballast Control Console]: Provides upgrades to the existing Ballast Control Consoles (BCS) and replace legacy BCS with a Programmable Logic Controller (PLC) based digital, networked system.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 16: Logistic Support	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	**Title***	**Subexhibits**	**ID CD**	**MDAP/ MAIS Code**	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-40a	LSD Midlife				- / 750.086	- / -	- / -	- / 7.594	- / -	- / 7.594
P-3a	1 / ST002 - LSD Flight Deck Thermal Management System (TBD)				- / 2.809	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / ST002 - LSD Ballast Control Console (TBD)				- / 7.438	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 760.333**	**- / 0.000**	**- / 0.000**	**- / 7.594**	**- / 0.000**	**- / 7.594**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	**Title***	**Subexhibits**	**ID CD**	**MDAP/ MAIS Code**	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-40a	LSD Midlife				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / ST002 - LSD Flight Deck Thermal Management System (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.809
P-3a	2 / ST002 - LSD Ballast Control Console (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 7.438
P-40	**Total Gross/Weapon System Cost**				**- / 17.667**	**- / 25.346**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 810.940**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
No net changes to FY 2022 baseline currently at $0.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife & Modernization	Aggregated Items Title: LSD Midlife

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
1) ST001 LSD MOD C4I System																				
1.1) Automated Digital Network System (ADNS)	A		-	-	0.497	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) Battle Force Tactical Network (BFTN)	A		-	-	0.220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) Digital Modular Radio (DMR)	A		-	-	1.151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) Global Broadcast System (GBS)	A		-	-	0.383	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) Information Systems Security Program (KMI and KW46)	A		-	-	0.110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6) Naval Modular Automated Communications System (NAVMACS)	A		-	-	0.301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.7) Advanced Digital Antenna Production (ADAP)	A		-	-	0.425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.8) Navy Multiband Terminal (NMT)	A		-	-	7.635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.9) CRYPTO	A		-	-	0.082	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.10) CANES	A		-	-	5.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.11) VINSON/ ANDVT Cryptographic Modernization (VACM)	A		-	-	0.325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.12) LSD MOD Interior Communications (IC) System	A		-	-	3.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) ST001 LSD MOD C4I System			**-**	**-**	***19.429***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2) ST5IN LSD Installation / DSA / AIT																				
2.1) LSD 46 FY18 EDSRA Installation / AIT	A		-	-	56.834	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) LSD 46 C4I Systems AIT	A		-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3) LSD 46 Special Selected Restricted Availability (SSRA)	A		-	-	9.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife & Modernization	Aggregated Items Title: LSD Midlife

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
2.4) LSD 46 Design Services Allocation (DSA)	A		-	-	8.728	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) ST5IN LSD Installation / DSA / AIT			**-**	**-**	***84.962***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3) ST001 - LSD MOD Combat System																				
3.1) LSD MOD CS Conjunctive Alterations	A		-	-	7.456	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) ST001 - LSD MOD Combat System			**-**	**-**	***7.456***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4) ST001 - LSD Mod HM&E Modernization																				
4.1) Canned Lube Oil Pump	A		-	-	16.543	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) LSD MOD HM&E Conjunctive Alterations	A		-	-	41.523	-	-	-	-	-	-	-	-	7.594	-	-	-	-	-	7.594
Subtotal: 4) ST001 - LSD Mod HM&E Modernization			**-**	**-**	***58.066***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***7.594***	**-**	**-**	**-**	**-**	**-**	***7.594***
5) ST003 LSD Hull, Mechanical and Electrical Condition System																				
5.1) LSD HM&E Condition System Procurement	A		-	-	1.759	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) ST003 LSD Hull, Mechanical and Electrical Condition System			**-**	**-**	***1.759***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
6) Other Prior Year Costs (1)																				
6.1) All Other Prior Year Costs	A		-	-	459.382	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.2) ST002 - Propeller Blades & PLMU	A		-	-	20.990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.3) ST002 - Generators & Elect Distribution	A		-	-	21.770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.4) ST002 - Low Pressure Air Compressor	A		-	-	18.809	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.5) ST002 - Steering Control System	A		-	-	54.308	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.6) ST002 - LSD Deck Crane	A		-	-	2.661	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.7) ST002 - Ballast Control Console	A		-	-	0.494	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) Other Prior Year Costs			**-**	**-**	***578.414***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization	**Aggregated Items Title:** LSD Midlife

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 Total		
			Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)	Unit Cost ($)	Qty (Each)	Total Cost ($ M)
Total			-	-	750.086	-	-	-	-	-	-	-	-	7.594	-	-	-	-	-	7.594

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Footnotes:

(1) Accounting entry for prior year funds of all other cost elements no longer funded.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization	**Modification Number / Title:** 1 / ST002 - LSD Flight Deck Thermal Management System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2.809	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.809
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2.809	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.809
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2.809**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**2.809**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
The Flight Deck Thermal Management System (FDTMS) (SCD 16657) Procures and installs heat mitigating, two layer, composite panels that provides heat protection to the helicopter deck to mitigate damage resulting from MV-22 vertical take off/landing (VTOL) flight operations.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization	**Modification Number / Title:** 1 / ST002 - LSD Flight Deck Thermal Management System
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ST002 - LSD Flight Deck Thermal Management System												
B Kits												
Recurring												
1.1.1) LSD Flight Deck Thermal Management System* - NonOrganic	1 / 1.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.078
Subtotal: Recurring	*- / 1.078*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.078*
Subtotal: ST002 - LSD Flight Deck Thermal Management System	*1 / 1.078*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 1.078*
Subtotal: Procurement, All Modification Items	*- / 1.078*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.078*
Support *(All Modification Items)*												
2.1) Non-recurring Engineering	- / 0.256	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.256
Subtotal: Support	*- / 0.256*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.256*
Installation												
Modification Item 1 of 1: ST002 - LSD Flight Deck Thermal Management System	- / 1.475	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.475
Subtotal: Installation	*- / 1.475*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.475*
Total												
Total Cost (Procurement + Support + Installation)	**2.809**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**2.809**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization	**Modification Number / Title:** 1 / ST002 - LSD Flight Deck Thermal Management System

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: ST002 - LSD Flight Deck Thermal Management System

Manufacturer Information

Manufacturer Name: Cellular Materials International (CMI) | Manufacturer Location: Virginia

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: LSD Flight Deck Thermal Management System*

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 1.475	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.475
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 1.475	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.475

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization	**Modification Number / Title:** 2 / ST002 - LSD Ballast Control Console
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	7.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.438
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	7.438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.438
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**7.438**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**7.438**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

SCD 18028 - Ballast Control Console (BCS) - Provides upgrades to the existing Ballast Control Consoles (BCS) and replaces legacy BCS with a Programmable Logic Controller (PLC) based digital, networked system. This mission and safety critical SCD addresses system degradation due to obsolescence issues, extensive downtime and reduced system capability/reliability. The system is currently operating in a degraded capacity and requires immediate replacement.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization	**Modification Number / Title:** 2 / ST002 - LSD Ballast Control Console
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ST002 - LSD Ballast Control Console												
B Kits												
Recurring												
1.1.1) BALLAST CONTROL CONSOLE UPGRADE* - NonOrganic	1 / 1.455	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.455
Subtotal: Recurring	*- / 1.455*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.455*
Subtotal: ST002 - LSD Ballast Control Console	*1 / 1.455*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 1.455*
Subtotal: Procurement, All Modification Items	*- / 1.455*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.455*
Support *(All Modification Items)*												
2.1) System Engineering/NonRecurring Engineering	- / 1.180	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.180
Subtotal: Support	*- / 1.180*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.180*
Installation												
Modification Item 1 of 1: ST002 - LSD Ballast Control Console	- / 4.803	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.803
Subtotal: Installation	*- / 4.803*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4.803*
Total												
Total Cost (Procurement + Support + Installation)	**7.438**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**7.438**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	**P-1 Line Item Number / Title:** 1610 / LSD Midlife & Modernization	**Modification Number / Title:** 2 / ST002 - LSD Ballast Control Console
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: ST002 - LSD Ballast Control Console

Manufacturer Information

Manufacturer Name: Hexagon	Manufacturer Location: Huntsville, AL
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 18

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Shipyard and Alteration Installation Team:: Installation Name: BALLAST CONTROL CONSOLE UPGRADE*

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 4.803	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 4.803
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 4.803	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 4.803

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1