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**Department of Defense  
Fiscal Year (FY) 2024 Budget Estimates**

March 2023



**Navy**

*Justification Book Volume 4 of 5*

***Other Procurement, Navy***

**Budget Activity 04**

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Navy • Budget Estimates FY 2024 • Procurement

**Table of Volumes**

Navy..... Volume 1

Navy..... Volume 2

Navy..... Volume 3

Navy..... Volume 4

Navy..... Volume 5

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Navy • Budget Estimates FY 2024 • Procurement

**Volume 4 Table of Contents**

**Introduction and Explanation of Contents.....Volume 4 - v**

**Comptroller Exhibit P-1.....Volume 4 - vii**

**Master Line Item Table of Contents (by Appropriation then Line Number).....Volume 4 - xlvii**

**Master Line Item Table of Contents (Alphabetically by Line Item Title).....Volume 4 - lvii**

**Exhibit P-40s..... Volume 4 - 1**

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## Department of Defense Appropriations Act, 2024

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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.

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

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## UNCLASSIFIED

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
<b><u>Budget Activity</u></b>					
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
<b>Total Other Procurement, Navy</b>	<b>11,124,829</b>	<b>12,138,590</b>	<b>2,170</b>	<b>12,140,760</b>	<b>14,535,257</b>

\*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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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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
<b><u>Budget Activity 01: Ships support equipment</u></b>									
<b>Ship Propulsion Equipment</b>									
1	Surface Power Equipment	A	U	0	41,414	0	46,478		
<b>Generators</b>									
2	Surface Combatant HM&E	A	U	0	78,054	0	74,585		
<b>Navigation Equipment</b>									
3	Other Navigation Equipment	A	U	0	72,300	0	87,800		
<b>Other Shipboard Equipment</b>									
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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## UNCLASSIFIED

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		Ident	Se				
No	Item Nomenclature	Code	c	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
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## Generators

2	Surface Combatant HM&E	A	U	0	74,585	0	105,441
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## Navigation Equipment

3	Other Navigation Equipment	A	U	0	87,800	0	110,286
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## Other Shipboard Equipment

4	Sub Periscope, Imaging and Supt Equip Prog	A	U	0	261,011	0	262,951
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5	DDG Mod	A	U	0	744,341	0	628,532
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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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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
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).

UNCLASSIFIED

## UNCLASSIFIED

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

Line No	Item Nomenclature	Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
				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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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
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		
<b>Reactor Plant Equipment</b>									
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		
<b>Ocean Engineering</b>									
27	Diving and Salvage Equipment	A	U	0	10,772	0	11,773		
<b>Small Boats</b>									
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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## UNCLASSIFIED

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

Line No	Item Nomenclature	Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
				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
<b>Reactor Plant Equipment</b>							
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
<b>Ocean Engineering</b>							
27	Diving and Salvage Equipment	A	U	0	11,773	0	18,086
<b>Small Boats</b>							
28	Standard Boats	A	U	0	88,562	0	74,963

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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
<b>Production Facilities Equipment</b>									
29	Operating Forces Ipe	A	U	0	460,822	0	174,743		
<b>Other Ship Support</b>									
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		
<b>Logistic Support</b>									
36	ISD Midlife & Modernization		U						
<b>Total Ships support equipment</b>					<b>4,267,668</b>		<b>4,714,192</b>		

\*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).



## UNCLASSIFIED

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

Line		Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
No	Item Nomenclature			Quantity	Cost	Quantity	Cost
<b>Production Facilities Equipment</b>							
29	Operating Forces Ipe	A	U	0	174,743	0	187,495
<b>Other Ship Support</b>							
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
<b>Logistic Support</b>							
36	ISD Midlife & Modernization		U			0	7,594
<b>Total Ships support equipment</b>					<b>4,714,192</b>		<b>5,776,998</b>

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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
<b><u>Budget Activity 02: Communications and electronics equipment</u></b>									
<b>Ship Sonars</b>									
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		
<b>ASW Electronic Equipment</b>									
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		
<b>Electronic Warfare Equipment</b>									

\*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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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost
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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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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
45	AN/SLQ-32	A	U	0	313,817	0	292,417		
<b>Reconnaissance Equipment</b>									
46	Shipboard IW Exploit	A	U	0	261,735	0	289,974		
47	Automated Identification System (AIS)		U	0	3,777	0	2,487		
<b>Other Ship Electronic Equipment</b>									
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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## UNCLASSIFIED

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		Ident	Se				
No	Item Nomenclature	Code	c	Quantity	Cost	Quantity	Cost
45	AN/SLQ-32	A	U	0	292,417	0	329,513
<b>Reconnaissance Equipment</b>							
46	Shipboard IW Exploit	A	U	0	289,974	0	379,230
47	Automated Identification System (AIS)		U	0	2,487	0	4,082
<b>Other Ship Electronic Equipment</b>							
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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## UNCLASSIFIED

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 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
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		
<b>Aviation Electronic Equipment</b>									
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		
<b>Other Shore Electronic Equipment</b>									
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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## UNCLASSIFIED

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

## Appropriation: 1810 Other Procurement, Navy

Line		Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
No	Item Nomenclature			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
<b>Aviation Electronic Equipment</b>							
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
<b>Other Shore Electronic Equipment</b>							
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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## UNCLASSIFIED

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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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
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						
<b>Shipboard Communications</b>									
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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## UNCLASSIFIED

Department of the Navy  
FY 2024 President's Budget  
Exhibit P-1 FY 2024 President's Budget  
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1810N Detail  
(Dollars in Thousands)

## Appropriation: 1810 Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
				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
<b>Shipboard Communications</b>							
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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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
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		
<b>Submarine Communications</b>									
78	Submarine Broadcast Support	A	U	0	47,579	0	91,150		
79	Submarine Communication Equipment	A	U	0	64,642	0	74,569		
<b>Satellite Communications</b>									
80	Satellite Communications Systems	A	U	0	30,136	0	39,827		
81	Navy Multiband Terminal (NMT)		U	0	34,723	0	24,586		
<b>Shore Communications</b>									
82	Joint Communications Support Element (JCSE)	A	U	0	2,651	0	2,651		
<b>Cryptographic Equipment</b>									
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).

## UNCLASSIFIED

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

Line No	Item Nomenclature	Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
				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
<b>Submarine Communications</b>							
78	Submarine Broadcast Support	A	U	0	91,150	0	73,791
79	Submarine Communication Equipment	A	U	0	74,569	0	83,178
<b>Satellite Communications</b>							
80	Satellite Communications Systems	A	U	0	39,827	0	72,871
81	Navy Multiband Terminal (NMT)		U	0	24,586	0	37,921
<b>Shore Communications</b>							
82	Joint Communications Support Element (JCSE)	A	U	0	2,651	0	5,065
<b>Cryptographic Equipment</b>							
83	Info Systems Security Program (ISSP)	A	U	0	156,034	0	154,890

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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
84	MIO Intel Exploitation Team	A	U	0	977	0	1,055		
<b>Cryptologic Equipment</b>									
85	Cryptologic Communications Equip	A	U	0	17,809	0	28,832		
<b>Other Electronic Support</b>									
86	Coast Guard Equipment	A	U	0	81,464	0	63,347		
<b>Drug Interdiction Support</b>									
87	Other Drug Interdiction Support	A	U	0	10,070				
<b>Total Communications and electronics equipment</b>					<b>3,281,303</b>		<b>3,299,809</b>		
<b><u>Budget Activity 03: Aviation support equipment</u></b>									
<b>Sonobuoys</b>									
88	Sonobuoys - All Types	A	U	0	296,871	0	303,520		
<b>Aircraft Support Equipment</b>									
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).

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## UNCLASSIFIED

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		Ident	Se				
No	Item Nomenclature	Code	c	Quantity	Cost	Quantity	Cost
84	MIO Intel Exploitation Team	A	U	0	1,055	0	1,079
<b>Cryptologic Equipment</b>							
85	Cryptologic Communications Equip	A	U	0	28,832	0	17,483
<b>Other Electronic Support</b>							
86	Coast Guard Equipment	A	U	0	63,347	0	77,458
<b>Drug Interdiction Support</b>							
87	Other Drug Interdiction Support	A	U				
<b>Total Communications and electronics equipment</b>					<b>3,299,809</b>		<b>3,967,071</b>
<b><u>Budget Activity 03: Aviation support equipment</u></b>							
<b>Sonobuoys</b>							
88	Sonobuoys - All Types	A	U	0	303,520	0	311,177
<b>Aircraft Support Equipment</b>							
89	Minotaur	A	U	0	5,247	0	5,396

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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
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						
<b>Total Aviation support equipment</b>					<b>737,556</b>		<b>957,476</b>		

\*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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## UNCLASSIFIED

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

Line No	Item Nomenclature	Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
				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
<b>Total Aviation support equipment</b>					<b>957,476</b>		<b>924,487</b>

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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
<b><u>Budget Activity 04: Ordnance support equipment</u></b>									
<b>Ship Gun System Equipment</b>									
100	Ship Gun Systems Equipment	A	U	0	5,536	0	5,902		
<b>Ship Missile Systems Equipment</b>									
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		
<b>FBM Support Equipment</b>									
104	Strategic Missile Systems Equip	A	U	0	276,430	0	279,430		
<b>ASW Support Equipment</b>									
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).

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## UNCLASSIFIED

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		Ident	Se				
No	Item Nomenclature	Code	c	Quantity	Cost	Quantity	Cost
<b>Budget Activity 04: Ordnance support equipment</b>							
<b>Ship Gun System Equipment</b>							
100	Ship Gun Systems Equipment	A	U	0	5,902	0	6,404
<b>Ship Missile Systems Equipment</b>							
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
<b>FBM Support Equipment</b>							
104	Strategic Missile Systems Equip	A	U	0	279,430	0	325,318
<b>ASW Support Equipment</b>							
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

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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
<b>Other Ordnance Support Equipment</b>									
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		
<b>Other Expendable Ordnance</b>									
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		
<b>Total Ordnance support equipment</b>					<b>1,043,088</b>		<b>1,209,869</b>		
<b><u>Budget Activity 05: Civil engineering support equipment</u></b>									
<b>Civil Engineering Support Equipment</b>									
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).

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## UNCLASSIFIED

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

Line No	Item Nomenclature	Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
				Quantity	Cost	Quantity	Cost
<b>Other Ordnance Support Equipment</b>							
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
<b>Other Expendable Ordnance</b>							
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
<b>Total Ordnance support equipment</b>					<b>1,209,869</b>		<b>1,256,530</b>

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

UNCLASSIFIED

## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
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		
<b>Total Civil engineering support equipment</b>					<b>156,510</b>		<b>159,226</b>		
 <b><u>Budget Activity 06: Supply support equipment</u></b>									
 <b>Supply Support Equipment</b>									
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		
<b>Total Supply support equipment</b>					<b>690,832</b>		<b>651,632</b>		

\*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).

## UNCLASSIFIED

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

Line No	Item Nomenclature	Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
				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
<b>Total Civil engineering support equipment</b>					<b>159,226</b>		<b>183,019</b>

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
<b>Total Supply support equipment</b>					<b>651,632</b>		<b>699,764</b>

## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
<b><u>Budget Activity 07: Personnel and command support equipment</u></b>									
<b>Training Devices</b>									
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		
<b>Command Support Equipment</b>									
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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## UNCLASSIFIED

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

Line		Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request			
No	Item Nomenclature			Quantity	Cost	Quantity	Cost		
<b><u>Budget Activity 07: Personnel and command support equipment</u></b>									
<b>Training Devices</b>									
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		
<b>Command Support Equipment</b>									
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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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
134	Enterprise Information Technology	A	U	0	31,709	0	29,407		
<b>Productivity Programs</b>									
137	Judgment Fund Reimbursement	A	U	0	3				
<b>Other</b>									
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		
<b>Classified Programs</b>									
999	Classified Programs		U		21,058		30,895		2,170
<b>Total Personnel and command support equipment</b>					<b>502,251</b>		<b>564,073</b>		<b>2,170</b>

\*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).

UNCLASSIFIED



## UNCLASSIFIED

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

Line		Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request	
No	Item Nomenclature			Quantity	Cost	Quantity	Cost
134	Enterprise Information Technology	A	U	0	29,407	0	42,154
<b>Productivity Programs</b>							
137	Judgment Fund Reimbursement	A	U				
<b>Other</b>							
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		
<b>Classified Programs</b>							
999	Classified Programs		U		33,065		16,290
<b>Total Personnel and command support equipment</b>					<b>566,243</b>		<b>611,488</b>

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## UNCLASSIFIED

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	Se c	Quantity	Cost	Quantity	Cost	Quantity	Cost <sup>+</sup>
<b>Budget Activity 08: Spares and repair parts</b>									
<b>Spares and Repair Parts</b>									
142	Spares and Repair Parts	A	U	0	445,621	0	582,313		
143	VIRGINIA Class (VACL) Spares and Repair parts	A	U						
<b>Total Spares and repair parts</b>					<b>445,621</b>		<b>582,313</b>		
<b>Total Other Procurement, Navy</b>					<b>11,124,829</b>		<b>12,138,590</b>		<b>2,170</b>

\*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).

## UNCLASSIFIED

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

Line		Ident Code	Se c	FY 2023 Total Enacted		FY 2024 Request			
No	Item Nomenclature			Quantity	Cost	Quantity	Cost		
<b>Budget Activity 08: Spares and repair parts</b>									
<b>Spares and Repair Parts</b>									
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		
<b>Total Spares and repair parts</b>					<b>582,313</b>		<b>1,115,900</b>		
<b>Total Other Procurement, Navy</b>					<b>12,140,760</b>		<b>14,535,257</b>		

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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)

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

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

UNCLASSIFIED

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

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

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

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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)

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

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

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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 Detail  
(Dollars in Thousands)

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

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

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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 Detail  
(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Overseas		FY 2024 Overseas	
				Operations Costs (OOC)		Operations Costs (OOC)	
Line		Ident	Se				
No	Item Nomenclature	Code	c	Quantity	Cost <sup>*</sup>	Quantity	Cost <sup>*</sup>
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.



UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

Master Line Item Table of Contents (by Appropriation then Line Number)

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
1	01	01	0131	Surface Power Equipment.....	Volume 1 - 1
2	01	02	0200	Surface Combatant HM&E.....	Volume 1 - 17
3	01	06	0670	Other Navigation Equipment.....	Volume 1 - 31
4	01	09	0840	Sub Periscope, Imaging and Supt Equip Prog.....	Volume 1 - 127
5	01	09	0900	DDG Mod.....	Volume 1 - 171
6	01	09	0910	Firefighting Equipment.....	Volume 1 - 239
7	01	09	0925	Command and Control Switchboard.....	Volume 1 - 257
8	01	09	0933	LHA/LHD Midlife.....	Volume 1 - 263
9	01	09	0934	LCC 19/20 Extended Service Life Program.....	Volume 1 - 323
10	01	09	0935	Pollution Control Equipment.....	Volume 1 - 333
11	01	09	0941	Submarine Support Equipment.....	Volume 1 - 355
12	01	09	0942	Virginia Class Support Equipment.....	Volume 1 - 369
13	01	09	0944	LCS Class Support Equipment.....	Volume 1 - 377
14	01	09	0945	Submarine Batteries.....	Volume 1 - 389
15	01	09	0946	LPD Class Support Equipment.....	Volume 1 - 395
16	01	09	0947	DDG 1000 Class Support Equipment.....	Volume 1 - 435

UNCLASSIFIED

UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

***Appropriation 1810N: Other Procurement, Navy***

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Line #	BA	BSA	Line Item Number	Line Item Title	Page
17	01	09	0950	Strategic Platform Support Equip.....	Volume 1 - 455
18	01	09	0955	Deep Subm Sys Proj (DSSP) Equip.....	Volume 1 - 465
19	01	09	0960	CG Modernization.....	Volume 1 - 469
20	01	09	0970	LCAC.....	Volume 1 - 501
21	01	09	0977	Underwater EOD Equipment.....	Volume 1 - 505
22	01	09	0981	Items less than \$5 Million.....	Volume 1 - 529
23	01	09	0989	Chemical Warfare Detectors.....	Volume 1 - 549
24	01	10	1000	Ship Maintenance, Repair and Modernization.....	Volume 1 - 569
25	01	10	1010	Reactor Power Units.....	Volume 1 - 583
26	01	10	1020	Reactor Components.....	Volume 1 - 587
27	01	11	1130	Diving and Salvage Equipment.....	Volume 1 - 591
28	01	12	1210	Standard Boats.....	Volume 1 - 617
29	01	14	1445	Operating Forces IPE.....	Volume 1 - 633
30	01	15	1600	LCS Common Mission Modules Equipment.....	Volume 1 - 647
31	01	15	1601	LCS MCM Mission Modules.....	Volume 1 - 659
32	01	15	1602	LCS ASW Mission Modules.....	Volume 1 - 673
33	01	15	1603	LCS SUW Mission Modules.....	Volume 1 - 685
34	01	15	1604	LCS In-Service Modernization.....	Volume 1 - 695

UNCLASSIFIED

UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

**Appropriation 1810N: Other Procurement, Navy**

Line #	BA	BSA	Line Item Number	Line Item Title	Page
35	01	15	1611	Small & Medium UUV.....	Volume 1 - 711
36	01	16	1610	LSD Midlife & Modernization.....	Volume 1 - 727

**Appropriation 1810N: Other Procurement, Navy**

Line #	BA	BSA	Line Item Number	Line Item Title	Page
37	02	02	2026	SPQ-9B Radar.....	Volume 2 - 1
38	02	02	2136	AN/SQQ-89 Surf ASW Cmbt Sys.....	Volume 2 - 11
39	02	02	2150	SSN Acoustic Equipment.....	Volume 2 - 45
40	02	02	2176	Undersea Warfare Support Equipment.....	Volume 2 - 89
41	02	03	2210	Submarine Acoustic Warfare System.....	Volume 2 - 99
42	02	03	2213	Surface Ship Torpedo Def (SSTD).....	Volume 2 - 129
43	02	03	2225	Fixed Surveillance System.....	Volume 2 - 137
44	02	03	2237	SURTASS.....	Volume 2 - 141
45	02	04	2312	AN/SLQ-32.....	Volume 2 - 165
46	02	05	2360	Shipboard IW Exploit.....	Volume 2 - 205
47	02	05	2361	Automatic Identification System (AIS).....	Volume 2 - 243

UNCLASSIFIED

UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

**Appropriation 1810N: Other Procurement, Navy**

Line #	BA	BSA	Line Item Number	Line Item Title	Page
48	02	07	2606	Cooperative Engagement Capability.....	Volume 2 - 247
49	02	07	2611	Naval Tact Cmd Supt Sys (NTCSS).....	Volume 2 - 271
50	02	07	2614	Adv Tact Data Link Sys (ATDLS).....	Volume 2 - 283
51	02	07	2618	Navy Command and Control System (NCCS).....	Volume 2 - 295
52	02	07	2622	Minesweeping System Replacement.....	Volume 2 - 303
53	02	07	2624	Shallow Water MCM.....	Volume 2 - 307
54	02	07	2657	NAVSTAR GPS Receivers (Space).....	Volume 2 - 315
55	02	07	2666	American Forces Radio and TV Service (AFRTS).....	Volume 2 - 325
56	02	07	2676	Strategic Platform Support Equip.....	Volume 2 - 331
57	02	09	2820	Ashore ATC Equipment.....	Volume 2 - 335
58	02	09	2830	Afloat ATC Equipment.....	Volume 2 - 407
59	02	09	2851	ID Systems.....	Volume 2 - 439
60	02	09	2867	Joint Precision Approach and Landing System(JPALS).....	Volume 2 - 479
61	02	09	2876	Naval Mission Planning Systems.....	Volume 2 - 487
62	02	10	2900	Maritime Integrated Broadcast System.....	Volume 2 - 497
63	02	10	2906	Tactical/Mobile C4I Systems.....	Volume 2 - 501
64	02	10	2914	Distributed Common Ground System-Navy (DCGS-N).....	Volume 2 - 519
65	02	10	2915	CANES.....	Volume 2 - 535

UNCLASSIFIED

UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

**Appropriation 1810N: Other Procurement, Navy**

Line #	BA	BSA	Line Item Number	Line Item Title	Page
66	02	10	2920	RADIAC.....	Volume 2 - 549
67	02	10	2925	CANES Intell.....	Volume 2 - 561
68	02	10	2940	Gen Purp Elec Test Equip (GPETE).....	Volume 2 - 571
69	02	10	2950	Network Tactical Common Data Link (CDL).....	Volume 2 - 583
70	02	10	2960	Integ Combat System Test Facility.....	Volume 2 - 591
71	02	10	2970	EMI Control Instrumentation.....	Volume 2 - 595
72	02	10	2980	Items less than \$5 Million.....	Volume 2 - 599
73	02	10	2981	In-Service Radars and Sensors.....	Volume 2 - 635
74	02	11	2437	Battle Force Tactical Network.....	Volume 2 - 663
75	02	11	3010	Shipboard Tactical Comms.....	Volume 2 - 667
76	02	11	3050	Ship Communications Automation.....	Volume 2 - 679
77	02	11	3057	Communications Items under \$5M.....	Volume 2 - 707
78	02	12	3107	Submarine Broadcast Support.....	Volume 2 - 721
79	02	12	3130	Submarine Communication Equipment.....	Volume 2 - 725
80	02	13	3215	Satellite Communications Systems.....	Volume 2 - 729
81	02	13	3216	Navy Multiband Terminal (NMT).....	Volume 2 - 749
82	02	14	3302	Joint Communications Support Element (JCSE).....	Volume 2 - 763
83	02	15	3415	Info Systems Security Program (ISSP).....	Volume 2 - 767

UNCLASSIFIED

UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

**Appropriation 1810N: Other Procurement, Navy**

Line #	BA	BSA	Line Item Number	Line Item Title	Page
84	02	15	3417	MIO Intel Exploitation Team.....	Volume 2 - 805
85	02	16	3501	Cryptologic Communications Equip.....	Volume 2 - 809
86	02	17	3620	Coast Guard Equipment.....	Volume 2 - 821

**Appropriation 1810N: Other Procurement, Navy**

Line #	BA	BSA	Line Item Number	Line Item Title	Page
88	03	01	4048	Sonobuoys - All Types.....	Volume 3 - 1
89	03	03	3640	Minotaur.....	Volume 3 - 19
90	03	03	4204	Weapons Range Support Equipment.....	Volume 3 - 23
91	03	03	4213	Aircraft Support Equipment.....	Volume 3 - 37
92	03	03	4217	Advanced Arresting Gear (AAG).....	Volume 3 - 79
93	03	03	4219	Electromagnetic Aircraft Launch System (EMALS).....	Volume 3 - 89
94	03	03	4226	Meteorological Equipment.....	Volume 3 - 105
95	03	03	4248	Legacy Airborne MCM.....	Volume 3 - 117
96	03	03	4250	Common Control System.....	Volume 3 - 123
97	03	03	4268	Aviation Support Equipment.....	Volume 3 - 127

UNCLASSIFIED

UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

**Appropriation 1810N: Other Procurement, Navy**

Line #	BA	BSA	Line Item Number	Line Item Title	Page
98	03	03	4269	UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn.....	Volume 3 - 159
99	03	03	4604	Architect & Cap for Autonomy in Nav Enter (ARCANE).....	Volume 3 - 177

**Appropriation 1810N: Other Procurement, Navy**

Line #	BA	BSA	Line Item Number	Line Item Title	Page
100	04	02	5111	Ship Gun Systems Equipment.....	Volume 4 - 1
101	04	03	5227	HARPOON Support Equipment.....	Volume 4 - 7
102	04	03	5231	Ship Missile Support Equipment.....	Volume 4 - 11
103	04	03	5253	Tomahawk Support Equipment.....	Volume 4 - 61
104	04	04	5358	Strategic Missile Systems Equip.....	Volume 4 - 67
105	04	05	5420	SSN Combat Control Systems.....	Volume 4 - 103
106	04	05	5429	ASW Support Equipment.....	Volume 4 - 129
107	04	06	5509	EOD Equipment.....	Volume 4 - 145
108	04	06	5543	Items Less Than \$5 Million.....	Volume 4 - 159
109	04	07	5530	Anti-ship Missile Decoy System.....	Volume 4 - 165
110	04	07	5661	Submarine Training Device Mods.....	Volume 4 - 177

UNCLASSIFIED

UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

***Appropriation 1810N: Other Procurement, Navy***

Line #	BA	BSA	Line Item Number	Line Item Title	Page
111	04	07	5664	Surface Training Equipment.....	Volume 4 - 189

***Appropriation 1810N: Other Procurement, Navy***

Line #	BA	BSA	Line Item Number	Line Item Title	Page
112	05	01	6003	Passenger Carrying Vehicles.....	Volume 5 - 1
113	05	01	6007	General Purpose Trucks.....	Volume 5 - 11
114	05	01	6024	Construction & Maint Equip.....	Volume 5 - 23
115	05	01	6027	Fire Fighting Equipment.....	Volume 5 - 49
116	05	01	6028	Tactical Vehicles.....	Volume 5 - 57
117	05	01	6033	Amphibious Equipment.....	Volume 5 - 65
118	05	01	6058	Pollution Control Equipment.....	Volume 5 - 69
119	05	01	6060	Items less than \$5 Million.....	Volume 5 - 73
120	05	01	6075	Physical Security Vehicles.....	Volume 5 - 109

UNCLASSIFIED



UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

***Appropriation 1810N: Other Procurement, Navy***

Line #	BA	BSA	Line Item Number	Line Item Title	Page
121	06	01	7025	Supply Equipment.....	Volume 5 - 113
122	06	01	7066	First Destination Transportation.....	Volume 5 - 123

***Appropriation 1810N: Other Procurement, Navy***

Line #	BA	BSA	Line Item Number	Line Item Title	Page
124	07	01	8081	Training Support Equipment.....	Volume 5 - 127
125	07	01	8101	Training and Education Equipment.....	Volume 5 - 133
126	07	02	8106	Command Support Equipment.....	Volume 5 - 161
127	07	02	8109	Medical Support Equipment.....	Volume 5 - 179
129	07	02	8114	Naval MIP Support Equipment.....	Volume 5 - 187
130	07	02	8118	Operating Forces Support Equipment.....	Volume 5 - 195
131	07	02	8120	C4ISR Equipment.....	Volume 5 - 201
132	07	02	8126	Environmental Support Equipment.....	Volume 5 - 205
133	07	02	8128	Physical Security Equipment.....	Volume 5 - 217

UNCLASSIFIED

UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
134	07	02	8161	Enterprise Information Technology.....	Volume 5 - 235
139	07	05	8164	Next Generation Enterprise Service.....	Volume 5 - 247
140	07	05	8645	Cyberspace Activities.....	Volume 5 - 255
141	07	05	8646	Cyber Mission Forces.....	Volume 5 - 263

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
142	08	01	9020	Spares and Repair Parts.....	Volume 5 - 269
143	08	01	9021	VIRGINIA Class (VACL) Spares and Repair Parts.....	Volume 5 - 281

**UNCLASSIFIED**

Navy • Budget Estimates FY 2024 • Procurement

**Master Line Item Table of Contents (Alphabetically by Line Item Title)**

Line Item Title	Line Item Number	Line #	BA	BSA	Page
AN/SLQ-32	2312	45	02	04.....	Volume 2 - 165
AN/SQQ-89 Surf ASW Cmbt Sys	2136	38	02	02.....	Volume 2 - 11
ASW Support Equipment	5429	106	04	05.....	Volume 4 - 129
Adv Tact Data Link Sys (ATDLS)	2614	50	02	07.....	Volume 2 - 283
Advanced Arresting Gear (AAG)	4217	92	03	03.....	Volume 3 - 79
Afloat ATC Equipment	2830	58	02	09.....	Volume 2 - 407
Aircraft Support Equipment	4213	91	03	03.....	Volume 3 - 37
American Forces Radio and TV Service (AFRTS)	2666	55	02	07.....	Volume 2 - 325
Amphibious Equipment	6033	117	05	01.....	Volume 5 - 65
Anti-ship Missile Decoy System	5530	109	04	07.....	Volume 4 - 165
Architect & Cap for Autonomy in Nav Enter (ARCANE)	4604	99	03	03.....	Volume 3 - 177
Ashore ATC Equipment	2820	57	02	09.....	Volume 2 - 335
Automatic Identification System (AIS)	2361	47	02	05.....	Volume 2 - 243
Aviation Support Equipment	4268	97	03	03.....	Volume 3 - 127
Battle Force Tactical Network	2437	74	02	11.....	Volume 2 - 663
C4ISR Equipment	8120	131	07	02.....	Volume 5 - 201
CANES	2915	65	02	10.....	Volume 2 - 535

**UNCLASSIFIED**

# UNCLASSIFIED

## Navy • Budget Estimates FY 2024 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
CANES Intell	2925	67	02	10.....	Volume 2 - 561
CG Modernization	0960	19	01	09.....	Volume 1 - 469
Chemical Warfare Detectors	0989	23	01	09.....	Volume 1 - 549
Coast Guard Equipment	3620	86	02	17.....	Volume 2 - 821
Command Support Equipment	8106	126	07	02.....	Volume 5 - 161
Command and Control Switchboard	0925	7	01	09.....	Volume 1 - 257
Common Control System	4250	96	03	03.....	Volume 3 - 123
Communications Items under \$5M	3057	77	02	11.....	Volume 2 - 707
Construction & Maint Equip	6024	114	05	01.....	Volume 5 - 23
Cooperative Engagement Capability	2606	48	02	07.....	Volume 2 - 247
Cryptologic Communications Equip	3501	85	02	16.....	Volume 2 - 809
Cyber Mission Forces	8646	141	07	05.....	Volume 5 - 263
Cyberspace Activities	8645	140	07	05.....	Volume 5 - 255
DDG 1000 Class Support Equipment	0947	16	01	09.....	Volume 1 - 435
DDG Mod	0900	5	01	09.....	Volume 1 - 171
Deep Subm Sys Proj (DSSP) Equip	0955	18	01	09.....	Volume 1 - 465
Distributed Common Ground System-Navy (DCGS-N)	2914	64	02	10.....	Volume 2 - 519
Diving and Salvage Equipment	1130	27	01	11.....	Volume 1 - 591
EMI Control Instrumentation	2970	71	02	10.....	Volume 2 - 595
EOD Equipment	5509	107	04	06.....	Volume 4 - 145

UNCLASSIFIED

**UNCLASSIFIED**

**Navy • Budget Estimates FY 2024 • Procurement**

<b>Line Item Title</b>	<b>Line Item Number</b>	<b>Line #</b>	<b>BA</b>	<b>BSA</b>	<b>Page</b>
Electromagnetic Aircraft Launch System (EMALS)	4219	93	03	03.....	Volume 3 - 89
Enterprise Information Technology	8161	134	07	02.....	Volume 5 - 235
Environmental Support Equipment	8126	132	07	02.....	Volume 5 - 205
Fire Fighting Equipment	6027	115	05	01.....	Volume 5 - 49
Firefighting Equipment	0910	6	01	09.....	Volume 1 - 239
First Destination Transportation	7066	122	06	01.....	Volume 5 - 123
Fixed Surveillance System	2225	43	02	03.....	Volume 2 - 137
Gen Purp Elec Test Equip (GPETE)	2940	68	02	10.....	Volume 2 - 571
General Purpose Trucks	6007	113	05	01.....	Volume 5 - 11
HARPOON Support Equipment	5227	101	04	03.....	Volume 4 - 7
ID Systems	2851	59	02	09.....	Volume 2 - 439
In-Service Radars and Sensors	2981	73	02	10.....	Volume 2 - 635
Info Systems Security Program (ISSP)	3415	83	02	15.....	Volume 2 - 767
Integ Combat System Test Facility	2960	70	02	10.....	Volume 2 - 591
Items Less Than \$5 Million	5543	108	04	06.....	Volume 4 - 159
Items less than \$5 Million	0981	22	01	09.....	Volume 1 - 529
Items less than \$5 Million	2980	72	02	10.....	Volume 2 - 599
Items less than \$5 Million	6060	119	05	01.....	Volume 5 - 73
Joint Communications Support Element (JCSE)	3302	82	02	14.....	Volume 2 - 763
Joint Precision Approach and Landing System(JPALS)	2867	60	02	09.....	Volume 2 - 479

**UNCLASSIFIED**

# UNCLASSIFIED

## Navy • Budget Estimates FY 2024 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
LCAC	0970	20	01	09.....	Volume 1 - 501
LCC 19/20 Extended Service Life Program	0934	9	01	09.....	Volume 1 - 323
LCS ASW Mission Modules	1602	32	01	15.....	Volume 1 - 673
LCS Class Support Equipment	0944	13	01	09.....	Volume 1 - 377
LCS Common Mission Modules Equipment	1600	30	01	15.....	Volume 1 - 647
LCS In-Service Modernization	1604	34	01	15.....	Volume 1 - 695
LCS MCM Mission Modules	1601	31	01	15.....	Volume 1 - 659
LCS SUW Mission Modules	1603	33	01	15.....	Volume 1 - 685
LHA/LHD Midlife	0933	8	01	09.....	Volume 1 - 263
LPD Class Support Equipment	0946	15	01	09.....	Volume 1 - 395
LSD Midlife & Modernization	1610	36	01	16.....	Volume 1 - 727
Legacy Airborne MCM	4248	95	03	03.....	Volume 3 - 117
MIO Intel Exploitation Team	3417	84	02	15.....	Volume 2 - 805
Maritime Integrated Broadcast System	2900	62	02	10.....	Volume 2 - 497
Medical Support Equipment	8109	127	07	02.....	Volume 5 - 179
Meteorological Equipment	4226	94	03	03.....	Volume 3 - 105
Minesweeping System Replacement	2622	52	02	07.....	Volume 2 - 303
Minotaur	3640	89	03	03.....	Volume 3 - 19
NAVSTAR GPS Receivers (Space)	2657	54	02	07.....	Volume 2 - 315
Naval MIP Support Equipment	8114	129	07	02.....	Volume 5 - 187

UNCLASSIFIED

UNCLASSIFIED

Navy • Budget Estimates FY 2024 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
Naval Mission Planning Systems	2876	61	02	09.....	Volume 2 - 487
Naval Tact Cmd Supt Sys (NTCSS)	2611	49	02	07.....	Volume 2 - 271
Navy Command and Control System (NCCS)	2618	51	02	07.....	Volume 2 - 295
Navy Multiband Terminal (NMT)	3216	81	02	13.....	Volume 2 - 749
Network Tactical Common Data Link (CDL)	2950	69	02	10.....	Volume 2 - 583
Next Generation Enterprise Service	8164	139	07	05.....	Volume 5 - 247
Operating Forces IPE	1445	29	01	14.....	Volume 1 - 633
Operating Forces Support Equipment	8118	130	07	02.....	Volume 5 - 195
Other Navigation Equipment	0670	3	01	06.....	Volume 1 - 31
Passenger Carrying Vehicles	6003	112	05	01.....	Volume 5 - 1
Physical Security Equipment	8128	133	07	02.....	Volume 5 - 217
Physical Security Vehicles	6075	120	05	01.....	Volume 5 - 109
Pollution Control Equipment	0935	10	01	09.....	Volume 1 - 333
Pollution Control Equipment	6058	118	05	01.....	Volume 5 - 69
RADIAC	2920	66	02	10.....	Volume 2 - 549
Reactor Components	1020	26	01	10.....	Volume 1 - 587
Reactor Power Units	1010	25	01	10.....	Volume 1 - 583
SPQ-9B Radar	2026	37	02	02.....	Volume 2 - 1
SSN Acoustic Equipment	2150	39	02	02.....	Volume 2 - 45
SSN Combat Control Systems	5420	105	04	05.....	Volume 4 - 103

UNCLASSIFIED

# UNCLASSIFIED

## Navy • Budget Estimates FY 2024 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
SURTASS	2237	44	02	03.....	Volume 2 - 141
Satellite Communications Systems	3215	80	02	13.....	Volume 2 - 729
Shallow Water MCM	2624	53	02	07.....	Volume 2 - 307
Ship Communications Automation	3050	76	02	11.....	Volume 2 - 679
Ship Gun Systems Equipment	5111	100	04	02.....	Volume 4 - 1
Ship Maintenance, Repair and Modernization	1000	24	01	10.....	Volume 1 - 569
Ship Missile Support Equipment	5231	102	04	03.....	Volume 4 - 11
Shipboard IW Exploit	2360	46	02	05.....	Volume 2 - 205
Shipboard Tactical Comms	3010	75	02	11.....	Volume 2 - 667
Small & Medium UUV	1611	35	01	15.....	Volume 1 - 711
Sonobuoys - All Types	4048	88	03	01.....	Volume 3 - 1
Spares and Repair Parts	9020	142	08	01.....	Volume 5 - 269
Standard Boats	1210	28	01	12.....	Volume 1 - 617
Strategic Missile Systems Equip	5358	104	04	04.....	Volume 4 - 67
Strategic Platform Support Equip	0950	17	01	09.....	Volume 1 - 455
Strategic Platform Support Equip	2676	56	02	07.....	Volume 2 - 331
Sub Periscope, Imaging and Supt Equip Prog	0840	4	01	09.....	Volume 1 - 127
Submarine Acoustic Warfare System	2210	41	02	03.....	Volume 2 - 99
Submarine Batteries	0945	14	01	09.....	Volume 1 - 389
Submarine Broadcast Support	3107	78	02	12.....	Volume 2 - 721

UNCLASSIFIED



# UNCLASSIFIED

## Navy • Budget Estimates FY 2024 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
Submarine Communication Equipment	3130	79	02	12.....	Volume 2 - 725
Submarine Support Equipment	0941	11	01	09.....	Volume 1 - 355
Submarine Training Device Mods	5661	110	04	07.....	Volume 4 - 177
Supply Equipment	7025	121	06	01.....	Volume 5 - 113
Surface Combatant HM&E	0200	2	01	02.....	Volume 1 - 17
Surface Power Equipment	0131	1	01	01.....	Volume 1 - 1
Surface Ship Torpedo Def (SSTD)	2213	42	02	03.....	Volume 2 - 129
Surface Training Equipment	5664	111	04	07.....	Volume 4 - 189
Tactical Vehicles	6028	116	05	01.....	Volume 5 - 57
Tactical/Mobile C4I Systems	2906	63	02	10.....	Volume 2 - 501
Tomahawk Support Equipment	5253	103	04	03.....	Volume 4 - 61
Training Support Equipment	8081	124	07	01.....	Volume 5 - 127
Training and Education Equipment	8101	125	07	01.....	Volume 5 - 133
UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	4269	98	03	03.....	Volume 3 - 159
Undersea Warfare Support Equipment	2176	40	02	02.....	Volume 2 - 89
Underwater EOD Equipment	0977	21	01	09.....	Volume 1 - 505
VIRGINIA Class (VACL) Spares and Repair Parts	9021	143	08	01.....	Volume 5 - 281
Virginia Class Support Equipment	0942	12	01	09.....	Volume 1 - 369
Weapons Range Support Equipment	4204	90	03	03.....	Volume 3 - 23

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 2: Ship Gun System Equipment							<b>P-1 Line Item Number / Title:</b> 5111 / Ship Gun Systems Equipment					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	38.663	5.536	5.902	6.404	0.000	6.404	6.154	6.291	6.414	6.558	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	38.663	5.536	5.902	6.404	0.000	6.404	6.154	6.291	6.414	6.558	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>38.663</b>	<b>5.536</b>	<b>5.902</b>	<b>6.404</b>	<b>0.000</b>	<b>6.404</b>	<b>6.154</b>	<b>6.291</b>	<b>6.414</b>	<b>6.558</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	0.083	-	0.083	-	-	-	-	-	0.083
Flyaway Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<p><b>Description:</b> Ship gun system equipment provides funds for the procurement of equipment, material and Ordnance Alterations to improve combat effectiveness and logistic supportability for gun and mission planning systems, and ancillary support equipment.</p> <p>P40A - 1/ The Naval Fires Control System is an automated mission planning and coordination system for the Naval Surface Fire Support (NSFS) System. It automates shipboard land attack battle management duties to be interoperable and consistent with joint C4ISR systems. The system significantly improves the Navy's ability to support forces ashore. These improvements provide enhanced capabilities and reduce total ownership costs by improving reliability and supportability of in-service systems. This system also reduces manning requirements for NSFS missions.</p> <p>[P40A - 2 / NV039 Night Vision Devices]: [P40A - 2 / NV039 VISUAL AUGMENTATION SYSTEMS (VAS)]: The United States Navy Service Common Visual Augmentation Systems (VAS) Program of Record manages, procures, and maintains night vision devices, thermal detection devices, day/night weapons optics, and lasers in support of Navy combat capabilities with regard to the detection, recognition, classification, tracking, and destruction of hostile air and surface forces. The USN VAS Program also manages research into the future of visual augmentation systems and engages with Navy and DoD VAS stakeholders to ensure the Navy maintains competitive advantage over near-peer adversaries.</p> <p>Other Procurement, Navy funding provides the United States Navy Service Common Visual Augmentation Systems (VAS) Program of Record with funding to procure new and replacement night vision equipment, thermal detection equipment, day/night optics and associated test equipment for ships, submarines, carriers, expeditionary forces and shore installations so that commanders can maintain situational awareness in degraded visual environments while maintaining the greatest possible distance from threats.</p> <p>[P40A - 2 / NV051 Optical Sight Systems Production Improvement]: Procures various Product Improvements for MK46 OSS/MK20 Electro-Optical Sight System (EOSS) on DDG 51 and CG 47 Class ships. The OSS is an integral element of the MK 34 Gun Weapon System. These improvements provide enhanced force protection capabilities, improve availability to address increase in Fleet underway operations, and reduce total ownership costs by improved reliability and supportability of in-service equipment systems. System and component improvements include: Mod 0 Technical Refresh, upgrade of Daylight Imaging Sensor Field of View, system power supplies, Mod 0 console / monitor upgrade, system obsolescence replacement and component level product improvements.</p>												

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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 04: Ordnance Support Equipment / BSA 2: Ship Gun System Equipment					P-1 Line Item Number / Title: 5111 / Ship Gun Systems 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	Naval Fires Control Sys				- / 3.674	- / 0.388	- / 0.413	- / 0.426	- / -	- / 0.426
P-40a	Gun Fire Control Equipment	P-5a			- / 34.989	- / 5.148	- / 5.489	- / 5.978	- / -	- / 5.978
P-40	Total Gross/Weapon System Cost				- / 38.663	- / 5.536	- / 5.902	- / 6.404	- / 0.000	- / 6.404

\*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.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 2						P-1 Line Item Number / Title: 5111 / Ship Gun Systems Equipment									Aggregated Items Title: Naval Fires Control Sys					
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) INSTALLATION																				
1.1) FC0002 Installation of NFCS Equipment	A		245,000.00	1	0.245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) FC010 Product Improvement/ORDALT	A		-	-	1.699	-	-	0.178	-	-	0.190	-	-	0.197	-	-	-	-	-	0.197
1.3) FC011 Installation of ORDALT	A		-	-	0.755	-	-	0.098	-	-	0.104	-	-	0.107	-	-	-	-	-	0.107
1.4) FC830 Production Engineering Support (NFCS)	A		-	-	0.975	-	-	0.112	-	-	0.119	-	-	0.122	-	-	-	-	-	0.122
Subtotal: 1) INSTALLATION			-	-	3.674	-	-	0.388	-	-	0.413	-	-	0.426	-	-	-	-	-	0.426
Total			-	-	3.674	-	-	0.388	-	-	0.413	-	-	0.426	-	-	-	-	-	0.426

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-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 2							P-1 Line Item Number / Title: 5111 / Ship Gun Systems Equipment								Aggregated Items Title: Gun Fire Control Equipment <sup>(1)</sup>					
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) Equipment																				
1.1) NV039 Night Vision Devices	A		-	-	13.776	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) NV051 Optical Sight Systems Production Improvement	A		-	-	18.776	-	-	2.720	-	-	2.894	-	-	2.968	-	-	-	-	-	2.968
Subtotal: 1) Equipment			-	-	32.552	-	-	2.720	-	-	2.894	-	-	2.968	-	-	-	-	-	2.968
2) NV039 Visual Augmentation System																				
2.1) Night Vision Devices	A		-	-	0.143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) Night Vision, Individual (AN/PVS-31B) <sup>(2)(†)</sup>	A		9,750.00	224	2.184	8,650.00	251	2.171	8,650.00	275	2.379	8,650.00	329	2.846	-	-	-	8,650.00	329	2.846
2.3) NVD Helmet Mount <sup>(3)(†)</sup>	A		448.89	225	0.101	450.00	554	0.249	450.00	280	0.126	450.00	284	0.128	-	-	-	450.00	284	0.128
2.4) NVD Helmet Shroud <sup>(†)</sup>	A		-	-	-	-	-	-	100.00	827	0.083	100.00	288	0.029	-	-	-	100.00	288	0.029
2.5) SU-289/VCOG/SCO <sup>(†)</sup>	A		2,250.00	4	0.009	-	-	0.008	-	-	-	-	-	-	-	-	-	-	-	-
2.6) TAC	A		-	-	-	-	-	-	-	-	0.007	-	-	0.007	-	-	-	-	-	0.007
Subtotal: 2) NV039 Visual Augmentation System			-	-	2.437	-	-	2.428	-	-	2.595	-	-	3.010	-	-	-	-	-	3.010
Total			-	-	34.989	-	-	5.148	-	-	5.489	-	-	5.978	-	-	-	-	-	5.978

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

<sup>(†)</sup> indicates the presence of a P-5a

**Footnotes:**

<sup>(1)</sup> This program provides for the procurement of equipment, materials and Ordnance Alterations to improve combat effectiveness and maintain logistic supportability of Gun Fire Control Equipment, Optical Sight Systems (OSS) and Night Vision devices.

<sup>(2)</sup> FY24 increase due to increase in quantity.

<sup>(3)</sup> FY24 decrease due to decrease in quantity.

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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy									Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 2				P-1 Line Item Number / Title: 5111 / Ship Gun Systems Equipment					Aggregated Items: Gun Fire Control Equipment <sup>(1)</sup>			
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
2) NV039 Visual Augmentation System												
2.2) Night Vision, Individual (AN/ PVS-31B) <sup>(2)</sup>		2021	L3 Harris Technologies / Londonderry, NH	MIPR	DLA, Philadelphia, PA	Feb 2021	Feb 2021	224	9,750.00	Y		
2.2) Night Vision, Individual (AN/ PVS-31B) <sup>(2)</sup>		2022	L3 Harris Technologies / Londonderry, NH	MIPR	DLA, Philadelphia, PA	Feb 2022	Feb 2022	251	8,650.00	Y		
2.3) NVD Helmet Mount <sup>(3)</sup>		2021	Wilcox / Newington, NH	C / IDIQ	Crane, IN	Feb 2021	Feb 2021	225	450.00	Y		
2.3) NVD Helmet Mount <sup>(3)</sup>		2022	Wilcox / Newington, NH	C / IDIQ	Crane, IN	Feb 2022	Feb 2022	554	450.00	Y		
2.3) NVD Helmet Mount <sup>(3)</sup>		2023	Wilcox / Newington, NH	C / IDIQ	Crane, IN	Feb 2023	Sep 2023	280	450.00	Y		
2.3) NVD Helmet Mount <sup>(3)</sup>		2024	Wilcox / Newington, NH	C / IDIQ	Crane, IN	Feb 2024	Sep 2024	284	450.00	N		
2.4) NVD Helmet Shroud		2023	Wilcox / Newington, NH	C / IDIQ	Crane, IN	Sep 2023	Apr 2024	827	100.00	Y		
2.4) NVD Helmet Shroud		2024	Wilcox / Newington, NH	C / IDIQ	Crane, IN	Sep 2024	Apr 2025	288	100.00	N		
2.5) SU-289/VCOG/SCO		2021	Trijicon / Wixom, Michigan	MIPR	Quantico, MCB	Feb 2021	Feb 2021	4	2,200.00	Y		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment							<b>P-1 Line Item Number / Title:</b> 5227 / HARPOON Support Equipment					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	0.204	0.217	0.227	0.000	0.227	0.228	0.233	0.237	0.243	-	1.589
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	0.204	0.217	0.227	0.000	0.227	0.228	0.233	0.237	0.243	-	1.589
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>	<b>0.000</b>	<b>0.204</b>	<b>0.217</b>	<b>0.227</b>	<b>0.000</b>	<b>0.227</b>	<b>0.228</b>	<b>0.233</b>	<b>0.237</b>	<b>0.243</b>	<b>-</b>	<b>1.589</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b> The Director of the Undersea Warfare Division (N97) has ordered the reconstitution and integration of 64 Encapsulated (ENCAP) Harpoon BLK IC missile systems for the 688 class submarine fleet in order to provide over the horizon surface strike capabilities to the fleet. The ENCAP Harpoon missiles provide Navy Los Angeles-class nuclear attack submarines (SSN) a sub-launched, all-weather, long-range Anti-Surface Warfare (ASuW) missile to attack enemy warships at stand-off ranges, to include Surface and Amphibious Action Groups. There are currently retired Encapsulated Harpoons located at the Letterkenny Army Depot that are candidates for reconstitution and delivery to the submarine fleet. In order to accomplish this order, the ENCAP program will refurbish and recertify existing ENCAP H1C All Up Rounds from deep storage to an 'as new' war ready material condition. (ENCAP Harpoons were placed in deep storage in 1996). The controlled storage conditions achieved by the missile capsule have preserved the material condition of the weapon system, allowing for relatively quick recertification and reissue. Due to the ease and speed of missile recertification the ENCAP Harpoon Reconstitution Program will fill a critical, time sensitive ASuW capability gap and meet Speed to the Fleet 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 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment					P-1 Line Item Number / Title: 5227 / HARPOON 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	HARPOON Support - Support Costs				- / 0.000	- / 0.204	- / 0.217	- / 0.227	- / -	- / 0.227
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.204	- / 0.217	- / 0.227	- / 0.000	- / 0.227
*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 provided for shipboard software updates on submarines receiving the Encapsulated (ENCAP) Harpoon missile. The submarine software updates enable submarine launchers to accommodate the ENCAP Harpoon missiles.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3							P-1 Line Item Number / Title: 5227 / HARPOON Support Equipment							Aggregated Items Title: HARPOON Support - Support Costs							
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) Harpoon Support Equipment																					
1.1) ILS <sup>(1)</sup>		A		-	-	-	-	-	0.204	-	-	0.217	-	-	0.227	-	-	-	-	-	0.227
Subtotal: 1) Harpoon Support Equipment				-	-	0.000	-	-	0.204	-	-	0.217	-	-	0.227	-	-	-	-	-	0.227
Total				-	-	0.000	-	-	0.204	-	-	0.217	-	-	0.227	-	-	-	-	-	0.227

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

Footnotes:  
<sup>(1)</sup> ILS: FY 2024 growth due to additional missiles required to be refurbished and recertified for reissue.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment							<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,546.911	221.463	276.632	294.511	0.000	294.511	301.114	304.639	290.458	295.233	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,546.911	221.463	276.632	294.511	0.000	294.511	301.114	304.639	290.458	295.233	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1,546.911</b>	<b>221.463</b>	<b>276.632</b>	<b>294.511</b>	<b>0.000</b>	<b>294.511</b>	<b>301.114</b>	<b>304.639</b>	<b>290.458</b>	<b>295.233</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	3.383	5.057	9.608	-	9.608	3.284	1.890	1.714	1.165	Continuing	Continuing
Flyaway Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<p><b>Description:</b></p> <p>Ship Missile Support Equipment provides procurement and installation support to address fleet requirements for AEGIS Weapons System, Ships Self Defense System (SSDS), Vertical Launch Systems (VLS), NATO SEASPARROW Surface Missile System (NSSMS) , Rolling Airframe Missile (RAM) Guided Missile Launcher System (GMLS), Over The Horizon Weapon System (OTH WS), MK57 Vertical Launching System (VLS) Support Equipment, and Counter Unmanned Aircraft System (C-UAS). Below are program descriptions for each of these programs along with top line funding summaries.</p> <p>[P40A / NATO SEASPARROW]: [P40A / NATO SEASPARROW]: The NATO SEASPARROW Surface Missile System (NSSMS) is a shipboard Self-Defense Missile System. In addition to the standard mission of Anti-Air and Anti-Surface Defense (AAW, ASUW), NSSMS is designed to protect ship and crew from a variety of inbound threats, including Anti-Ship Cruise Missiles (ASCM), Fast Attack Craft/Fast Inshore Attack Craft (FAC/FIAC), Low Velocity Air Threats (LVAT), and a wide range of asymmetrical threats (e.g. Unmanned Aerial and Surface vehicles, small Rigid Hull Inflatable Boats, etc.).</p> <p>The legacy NSSMS configuration (MK57 MOD 2, 12/13, and 14/15) consists of Fire Control and Launcher Systems comprised of 2-4 Directors, a distributed computing network, Transmitter Group, 3-5 Operating Consoles, and 2 Eight-Cell missile Launching Systems (MK29) which employ the surface launch variant of the Sparrow (MK57 MOD 2/3) and ESSM (MK57 MOD 12/13 and 14/15). In the MOD 12 and higher configuration, the MK57 NSSMS becomes part of the SSDS MK 2 Combat System. The fully integrated configurations of NSSMS are the MK57 MOD 12 and above configurations. The MOD 12/13 system contains operator consoles which relay system data to the Ship Self Defense System (SSDS) via SSDS Local Area Network (LAN) which differs from the MOD 14/15 and above configurations which have had all NSSMS operator consoles removed and NSSMS equipment data is fed directly to SSDS via the Combat System (CS) LAN. At present, activities are focused on upgrading legacy systems (NSSMS MK57 Mod 2) to the MOD 14 or higher configuration. Efforts were underway to develop and field the MK29 Launcher Min-Mod BLK 2 update that enabled firing of ESSM BLK 2 missiles from NSSMS platforms. The program's initial approach to engineer a new servo motor was determined not viable during initial prototype testing requiring more extensive changes throughout the servo system. Rather than continue to modify the servo system, in Dec 2020 it was determined that minimizing structural changes with some control software updates would be more economical. To provide ESSM Block 2 capability as a functional compatibility to CVN/LHA ships, remaining design updates related to the loading operations, strengthening structure to required Safety Factor for both the MK 132 Launcher and MK 14 Loader are being completed. This also requires software modification to integrate ESSM Block 2 in Functional Compatibility and accommodate a mixed inventory of both ESSM configurations (Block 1 and Block 2) into a single launcher, requiring proper missile identification on the interface to the SSDS Combat System to accommodate enhanced maneuverability of the new missile.</p> <p>Improved Stalker (I-Stalker) will provide incremental improvements to the currently fielded Stalker Long Range Electro-Optic Sensor System (SLREOSS) in response to a 2016 United States Fleet Forces Command (USFFC)</p>												

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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 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment		P-1 Line Item Number / Title: 5231 / Ship Missile 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		
<p>Operational Needs Statement (ONS). SLREOSS was developed as a modular, portable, form/fit replacement for the NATO Sea Sparrow Missile System (NSSMS) MK 6 Low Light Level Television (LLTV) in response to the 2010 Naval Forces Central Command (NAVCENT) Counter Swarm Urgent Operational Need (UON) to combat Fast Attack Craft/Fast Inshore Attack Craft (FAC/FIAC). It is currently being fielded in either the NSSMS MK6 MOD 3 LLLTV Director Mount configuration or NSSMS MK6 MOD 4 LLLTV Independent Mount configuration depending on platform specifications. I-Stalker will provide required upgrades to the SLREOSS Independent Mount configuration with the enhanced capabilities provided by the Navy owned Situational Awareness System (SAwS) to deliver an integrated radar and electro-optic/Infrared control and display suite. I-Stalker includes two (2) NSSMS MK6 MOD 4 LLLTV Independent Mount systems and one (1) SAwS. This combined system is referred to as the AN/SAY-3. I-Stalker requirements are transitioning from individual resource sponsor management to a total program level consistent with the I-Stalker transition to a Program of Record (POR). For FY22 and prior years, I-Stalker funding is contained in BLI 5231. In FY23, BLI 5231 contains funding from OPNAV N95, and BLI 2980 contains funding from OPNAV N98. In FY24 and out, BLI 2981 contains funding from OPNAV N95 in support of LHA/LHD ship classes and OPNAV N98 in support of the CVN ship class.</p> <p>[P40A - 2 / RAM GMLS]: Rolling Airframe Missile (RAM) - MK 49 Guided Missile Launching System (GMLS): RAM is a cooperative program with the Federal Republic of Germany, produced under a series of production Memorandum of Understandings, the latest amended 30 July 2019 between the U.S. and the Federal Republic of Germany.</p> <p>The MK-31 Guided Missile Weapon System (GMWS) is a lightweight, quick-reaction, high firepower missile system designed to provide anti-ship missile defense. The system is comprised of a MK- 44 Guided Missile Round Pack (GMRP) and the MK 49 GMLS, which holds 21 RAM missiles. The 21-round launcher is compatible with various platforms ranging from large USN aircraft carriers to Littoral Combat Ship (LCS). This system is designed to counter high-density anti-ship, cruise missile raids and provide for ship survivability with accurate terminal guidance, proven lethality and no fire control illumination dependence.</p> <p>Funding supports the hardware procurement and installation of Ordnance Alterations (ORDALT) to address safety, obsolescence, and enable the firing of new missile variants. Hardware production lead time is 24 months and installations are executed in accordance with Ship Maintenance Availability Schedules. FY24 changes address a shock deficiency issue discovered during shipboard testing. The FY24 procurement of the Shock and Firepower ORDALTs will add the firepower capability increasing the number of ships capable of fully employing the RAM Block 2B missile to meet self-defense probability of raid annihilation (PRA) requirements against evolving threat raid scenarios. The Firepower ORDALT also supports launcher readiness due to the obsolescence of multiple components in the current configuration. The Shock ORDALT will address safety deficiencies identified during testing and eliminate restrictions on the launcher that could render the launcher inoperable in the event of a major ship shock event.</p> <p>FY24 funding provides for procurement of four Shock ORDALTs and four Firepower ORDALTs and installation of 10 previously procured Firepower ORDALTs.</p> <p>[P40A - 3 / Ship Self Defense System]: The Ship Self Defense System (SSDS) is the core combat system control element for the Quick Reaction Combat Capability (QRCC) in aircraft carriers and amphibious assault ships, which defends against Anti-Ship Cruise Missiles (ASCM).</p> <p>Major changes from FY 2023 to FY 2024 are below:</p> <p>The Program office over the 2022 budget cycle refined the Hardware and Software procurement costs and timelines. Additionally, all cost codes were evaluated to ensure tasking was accurately reported in the correct cost code. Starting in FY22 and out years, these refinements in lead times, costs, and realignment in cost code reporting were implemented. Part of this refinement now documents software being procured over multiple years to account for the build of the tactical software load, procurement of software licenses (ie Red Hat, High Speed Guard) and annual software license renewals and certification. Additionally, this refinement documents the final installation checkout activities. In FY22 Cyber Security costs have been moved to UA005A cost code. In FY23, procurements are starting to transition from TI-16 TR configuration to the new Computing Infrastructure (CI) configuration. This transition impacts cost for hardware, software, software licenses, and installation and advanced planning. The lead ship class is planned to be the LPDs for the incorporation of the new CI configuration. Cost will vary based on the ships' Combat System configuration and the new CI configuration.</p> <p>In FY23 the program is procuring 2 shipsets (2 LPDs), 1 Shore Site, and CAC2S Afloat hardware. The Program is installing 1 Shipset system (1 LHD), 2 Shore Site system and conducting Year 2 advanced planning* for 1 future (FY24) Ships installation, conducting Year 1 advanced planning* for 2 (FY25) future Ship installations, conducting final checkout on 2 Ships and conducting advanced planning for 1 future</p>		

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Line Item MDAP/MAIS Code: N/A		
<p>(FY24) Shore Site installation. The Program is planning to conduct 3 CSSQTs (1 LHD, 1 CVN, 1 LPD) and conducting Year 2 CSSQT advanced planning* for 2 future (FY24) CSSQT events (1 LHD, 1 LPD) and conducting Year 1 CSSQT advanced planning* for 2 future (FY26) CSSQT event (1 LHD, 1 LPD).</p> <p>In FY24 the program is procuring 2 shipsets (1 CVN and 1 LHD), 1 Shore Site, and CAC2S Afloat hardware. The Program is installing 1 Shipset system (1 LPD), 1 Shore Site system and conducting Year 2 advanced planning* for 2 future (FY25) Ships installations, conducting Year 1 advanced planning* for 2 future (FY26) Ship installations, conducting final checkout on 1 Ship and conducting advanced planning for 1 future (FY25) Shore Site installation. The Program is planning to conduct 2 CSSQT events (1 LHD, 1 LPD) and conducting Year 1 CSSQT advanced planning* for 2 future (FY26) CSSQT events (1 LHD, 1 LPD).</p> <p>*Advanced Planning is done in each of the 2 years prior to an installation *Advanced Planning is done in each of the 2 years prior to a CSSQT event</p> <p>The SSDS cost have been increasing. This is primarily the transition to the new Computing Infrastructure configuration. In addition, increased cost are attributed to higher cost of material due to supply chain issues, implementation of required engineering changes to address hardware component obsolescence and diminishing manufacturing sourcing issues. Price increases are reflected starting in FY 2021 and out year hardware and software costs.</p> <p>Ship Installation Cost, which includes advanced planning in each of the 2 years prior to an installation, will vary per year depending on the quantities of ships, the mix of ship classes, the configuration of the specific hull (i.e., CVN, LHD, LHA, LPD, or LSD) and the geographical location of the CNO availability (e.g., Bremerton, Norfolk, San Diego). Installation cost is significantly higher than advanced planning. This can cause large variations between years. Recently, the installation cost has been increasing due to a) installations in non-traditional locations (e.g., Bremerton) driven by the Coast-wide bid process which causes extensive travel costs, b) Delays in delivery of Ship Installation Drawings, and c) scope changes during the modernization window. Further apparent cost "increases" are due to aligning modernization-related work such as Combat System documentation updates within the modernization budget.</p> <p>CSSQT cost per year will vary depending on the quantities of CSSQT events conducted and the advanced planning required for the quantities of future ships. The cost also varies depending on the mix of ship classes (i.e., CVN, LHD, LHA, LPD, or LSD) in any given year and the CS weapons configuration. CSSQT events cost are significantly higher than advanced planning costs.</p> <p>SSDS Description: SSDS integrates a diverse set of fire control loop sensors and weapons and C4I systems for each ship class (CVN68, CVN78, LHA6, LHD1, LPD17, LSD41 and LSD49 ship classes). SSDS MK 2 provides the capabilities for integrated air and missile defense, multi-warfare situational awareness, combat direction, and joint interoperability via the Cooperative Engagement Capability (CEC) and Tactical Digital Information Link (TADIL)-J (Link 16).</p> <p>SSDS MK 2 continues being fielded with the new construction carriers (CVN78 class), new construction amphibious ships (LHA 6, LPD 17 classes) and modernizing in-service SSDS MK 2 carriers (CVN 68 Class) and amphibious ships (LPD17, LHD 1 and LHA 6 Classes). Additionally, SSDS MK2 replaces the Advanced Combat Direction System (ACDS) in the LHD 1 class, and SSDS MK1 in the LSD 41, LSD 49 class, as fleet modernization initiatives. SSDS MK2 integrates new combat system warfighting capabilities and improvements on a phased basis via phased software Capability Packages and COTS hardware modernization. SSDS MK 2 increases operational capabilities, improves combat readiness and Strike Group and Expeditionary Strike Group interoperability including, the Fire Control Loop Improvement Project (FCLIP), Far-Term Interoperability Improvement Project (FTIIP), and Task Force Cyber Awakening (TFCA) Boundary Defense Capability. SSDS MK 2 equips back-fit LHDs and CVNs with an upgraded Combat System Display, Automatic Status Board (ASTABS), Remote ASTAB Controllers, peripheral control stations and Advanced Sensor Distribution System (ASDS), as well as, the SSDS MK 2 computing equipment.</p> <p>New hardware computing infrastructure baselines will implement Commercial-Off-The-Shelf (COTS) configurations to sustain system production and support the incorporation of new war-fighting capabilities (FY20-23 TI-16 Tech Refresh/FY 2023 Infrastructure as a Service (Computing Infrastructure). Each individual ship is generally planned for a hardware computing infrastructure upgrade on an eight to ten year interval to replace obsolescent COTS hardware, implement new technologies and support the fielding of these capabilities. Technology refresh of individual COTS components that are unprocureable or unsupported is handled on a case-by-case basis.</p>		

# UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment		P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment
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Line Item MDAP/MAIS Code: N/A		
<p>Procurement of SSDS shore site equipment includes shore-based SSDS equipment and full combat system suites for the Ship Combat Systems Center (SCSC), Wallops Island, Virginia; maintenance and operator training equipment at the Center for Surface Combat Systems (CSCS), Dam Neck, Virginia; the Self Defense Test Ship (SDTS) and the SSDS System Integration Lab (SIL), Lockheed Martin, Moorestown, New Jersey.</p> <p>P40A exhibits for SSDS includes the following:</p> <p>UQ002 - Production engineering support for SSDS hardware. These efforts include monitoring vendor production contracts/production line issues, creating shipset lists, responding to contractor production questions, receiving and shipping of equipment, creating and communication a detailed production schedule, troubleshooting failed production equipment, assisting in Factory Acceptance Testing (FAT), identification of fixes required to correct production flaws, and assist in resolution production related problems during ship installations.</p> <p>UQ003 - Engineering Change Proposal (ECP) and Ship Change Document (SCD) for SSDS hardware.</p> <p>UQ004 - Training Documentation Changes for SSDS hardware. Review and update SSDS MK2 Operator Maintenance Courses.</p> <p>UQ005A/B - COTS engineering/Obsolescence Kits/Field Changes for SSDS hardware and CAC2S hardware.</p> <p>UQ005A - COTS/Obsolescence engineering support for SSDS hardware at headquarters and field activities. Starting in FY22 Cyber Security hardware component procurement, assembly &amp; installation and support are reflected here.</p> <p>UQ005B - SSDS System procurement and CAC2S Hardware, to include, hardware procurement, Software licenses, installation documentation, and drawing specification of the defined SSDS COTS Conversion kits, dependent upon the shipboard or shore- site equipment configuration to include CAC2S Afloat components.</p> <p>UQ5IN - FMP Ship Units, installation planning and installation - The costs for each kit listed in the P-3a Description. SSDS kit funding provided to various contractors and field activities. The SSDS equipment procurement based on competitive contracts. Production lead-time for kits ranges from 12 months (for equipment COTS upgrade kits/field changes) up to 24 months for system COTS conversion kits for ships. Installation planning is conducted in each of the 2 years prior to the start of the installation. Installation funds are required to be on contract and at field activities 90-150 days prior to installation start.</p> <p>UQ6IN - Non FMP Shore Site units, installation planning and installation - Systems are required for SSDS/CS shore sites: The SSDS MK 2 System/Software Combat System Engineering Agent (SSDS System Integration Lab (SIL), Lockheed Martin, Moorestown, New Jersey); Surface Combat Systems Center (SCSC), Wallops Island, maintenance and operator training equipment at the Center for Surface Combat Systems (CSCS), Dam Neck, Virginia; the Self Defense Test Ship (SDTS).</p> <p>UQ007 - Combat System Ship Qualification Trial (CSSQT). Combat System Ship Qualification Trials are designated for CVNs and AMPHIBs in accordance with NAVSEAINST 9093.1 (series). CSSQTs will validate installation and operation of Combat System upgrades, and will ensure the crew can operate and maintain the new systems.</p> <p>UQ008 - Combat System Documentation &amp; Waterfront Support provides for generation, update, and validation of CS documentation because of CS configuration changes during ship modernization including Ship Selected Records, Combat System Operational Sequencing System, CS Capabilities and Limitations, Combat System Interface Diagrams, Combat System Alignment Manual and the Overall CS Operability Test. This also includes Combat System Project Engineers that coordinate with other SYSCOM elements for installation coordination and system of system testing with SSDS. CS documentation is produced for all CVN and Amphibious Class Ships undergoing Combat System SSDS MK 2 upgrades within the next 2 years.</p> <p>[P40A - 4 / AEGIS Support Equipment]: Provides equipment procurement and installation support for AEGIS Shore Facilities and Shipboard Upgrades to AEGIS Cruisers and Destroyers required to maintain the readiness of the AEGIS Weapon System in support of Combatant Commanders requirements.</p> <p>L7001: Provides funding to procure and maintain special test equipment (Adaptive Diagnostic Electronic Portable Test Set (ADEPT)/Radiation Probes) to support Maintenance and Troubleshooting efforts for the AEGIS Weapon System on CG's, DDG's, and critical shore sites. Provides Mk 99 Missile Fire Control System (MFCS) illuminator and pedestal assembly parts refurbishment, creates a depot pool of refurbished illuminator and pedestal assemblies to support periodic maintenance replacement on AEGIS CG's and DDG's.</p> <p>L7003: Provides funding to procure and maintain Integrated Warfare Systems Laboratory (IWSL) Weapons System and support infrastructure to support fleet issues resolution within the AEGIS Weapon System. (LBTS support stopped in FY13)</p>		



**UNCLASSIFIED**

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Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment		P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment
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Line Item MDAP/MAIS Code: N/A		
<p>L7006: Surface Combat Systems Center (SCSC): Provides funding to procure and maintain SCSC's weapons and combat systems and support infrastructure in support of fleet training requirements, integration, and test efforts required to complete Weapon and Combat System Certification.</p> <p>L7007: AEGIS Training and Readiness Center (ATRC): Provides funding to procure and maintain the ATRC's weapons and combat systems and support infrastructure in support of fleet training requirements for the AEGIS Weapon System.</p> <p>L7011: AEGIS Weapon System Ship Change Procurement: Provides funding to address fleet hardware issues related to equipment obsolescence, high failure, diminishing manufacturing sources (DMS) or to reduce maintenance costs and improve AEGIS operational availability (Ao) for fleet readiness. Supported by L7600 for installation.</p> <p>L7012: AN-SPY-1D/D(V) Radar Enhancements (ALPS): The AEGIS Linear Processing System (ALPS) program provides the AN/SPY-1D/D(V) radar with AAW improvements in a complex electronic environment.</p> <p>L7014: Aegis Baseline (BL) 5.4.1 (BMD 4.2) is a joint effort between Navy and MDA that refurbishes existing DDG AN/SPY-1 radar arrays with the installation of antenna Low Noise Amplifiers (LNAs). The program is being restructured as a result of cost growth, supply chain issues, and schedule delays for the LNA portion of the program. The LNA upgrades are being stopped but the software capability enhancements are being retained. Lockheed Martin is no longer manufacturing the AN/SPY-1 radar, so the option to pull an array from the production line real-time no longer exists. The last DDG 51 FLT IIA with AN/SPY-1 radar arrays has not entered service yet and has a 35 year expected service life. Spare SPY-1 arrays are a necessity. Because of the program restructuring, the \$37.7M increase in FY24 will be used to convert 8 LNA configured SPY-1 arrays back to their normal SPY-1 array configuration for use as fleet battle spares. This effort will assist with diminishing manufacturing source (DMS) issues and contribute to AEGIS wholeness and SPY operational availability.</p> <p>L7015: AEGIS SEARAM Integration and Installation Support: Provides integration and installation support for 4 forward deployed destroyers scheduled to receive the SEARAM upgrade. SEARAM is an anti-ship missile defense system that allows naval vessels to engage high-performance, supersonic, and subsonic threats (FY19 &amp; FY21 effort).</p> <p>L7016: AEGIS TI-12H Backfit: The Technology Insertion-12 Hybrid solution (TI-12H) is one of the compute infrastructures used to operate the AEGIS Weapon System on AEGIS cruisers and destroyers. The TI-12 compute infrastructure on some AEGIS Baseline 9 cruisers and destroyers is being upgraded (back-fitted) with a TI-12H to enable AEGIS Baseline 9 upgrades (effort start FY20, three procurements annually until FY23).</p> <p>L7017: Integrated Combat System (ICS) Equipment. Procures MK 6 MOD X equipment for combat system Land Based Test Sites and Infrastructure as a Service (IaaS) ORDALT kits. IaaS provides automated and scalable processing, network, storage, and other resources provided to the consumer. It enables the decoupling of hardware (HW) and software (SW), and eliminates the dependencies on specific HW configurations. IaaS enables the use of all available compute, storage, and network resources, while providing capacity for future growth and capability expansion. IaaS is a key component in our transition to an ICS. The MK 6 MOD X compute infrastructure will be developed with an IaaS capability. The IaaS ORDALT kits will enable IaaS capability on legacy TI-16 MK 6 MOD 0 and TI-16 MK 6 MOD 1 compute infrastructures in the fleet today.</p> <p>L7600: AEGIS Weapon System Ship Change Installation: Provides funding for ORDALT installation and other Ship Changes designed to improve AEGIS Combat System readiness. Supported by L7011 for procurement.</p>		
[P40A - 4 / L7001 - Depot Special Tooling/Test Equipment]: L7001 - Depot Special Tooling/Test Equipment: FY24 increases due to efforts associated with MK 99 Sustainment Pool and SPY-1A/B Test Equipment.		
[P40A - 4 / L7014 - SPY Radar Refurbishment (LNA)]: L7014: Aegis Baseline (BL) 5.4.1 (BMD 4.2) is a joint effort between Navy and MDA that refurbishes existing DDG AN/SPY-1 radar arrays with the installation of antenna Low Noise Amplifiers (LNAs). The program is being restructured as a result of cost growth, supply chain issues, and schedule delays for the LNA portion of the program. The LNA upgrades are being stopped but the software capability enhancements are being retained. Lockheed Martin is no longer manufacturing the AN/SPY-1 radar, so the option to pull an array from the production line real-time no longer exists. The last DDG 51 FLT IIA with AN/SPY-1 radar arrays has not entered service yet and has a 35 year expected service life. Spare SPY-1 arrays are a necessity. Because of the program restructuring, the \$37.7M increase in FY24 will be used to convert 8 LNA configured SPY-1 arrays back to their normal SPY-1 array configuration for use as fleet battle spares. This effort will assist with diminishing manufacturing source (DMS) issues and contribute to AEGIS wholeness and SPY operational availability.		
[P40A - 4 / L7017 - Integrated Combat System Equipment]: L7017: Integrated Combat System (ICS) Equipment. Procures MK 6 MOD X equipment for combat system Land Based Test Sites and Infrastructure as a Service (IaaS) ORDALT kits. IaaS provides automated and scalable processing, network, storage, and other resources provided to the consumer. It enables the decoupling of hardware (HW) and software (SW), and eliminates the dependencies on specific HW configurations. IaaS enables the use of all available compute, storage, and network resources, while providing capacity for future growth and capability expansion. IaaS is a key component in our transition to an ICS. The MK 6 MOD X compute infrastructure will be developed with an IaaS capability. The IaaS ORDALT kits will enable IaaS capability on legacy TI-16 MK 6 MOD 0 and TI-16 MK 6 MOD 1 compute infrastructures in the fleet today.		

# UNCLASSIFIED

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Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment		P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment
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Line Item MDAP/MAIS Code: N/A		
<p>[P40A - 5 / MK57 SUPPORT EQUIPMENT]: The MK 57 Vertical Launch System (VLS) is unique to the DDG 1000 class. Each ship has 80 total cells grouped into 20 four-cell modules. Flight 1 missiles to be carried on DDG 1000 include: Enhanced Sea Sparrow Missile (ESSM), Standard Missile-2 (SM-2) Blk III, Tomahawk Land Attack Missile (TLAM) Blk III/IV, and Vertical Launch Anti-Submarine Rocket (ASROC) (VLA). This 80-cell VLS design requires a Canister Electronic Unit (CEU) for each cell containing a missile.</p> <p>MK57 VLS support equipment costs include hardware/software, technical refresh, Installation and Checkout (INCO) material, testing requirements, logistics, obsolescence, and training requirements.</p> <p>[P40A - 5 / MK57 UCEU PRODUCTION ENGINEERING and LOGISTICS SUPPORT]: MK57 VERTICAL LAUNCH SYSTEM (VLS) UNIVERSAL CANISTER ELECTRONICS UNIT(UCEU) PRODUCTION ENGINEERING and LOGISTICS SUPPORT: Funds provided for systems engineering, testing, engineering changes, cyber security accreditation, installation, production support, and hardware. This funding line also provides for development of training curriculum, depot repair procedures, and logistics required to maintain compatibility and interoperability with Total Ship Computing Environment (TSCE) combat system on DDG 1000 Class.</p> <p>MK57 VERTICAL LAUNCH SYSTEM (VLS) UCEU HARDWARE PROCUREMENT: The Independent Government Cost Estimate (IGCE) for MK57 UCEU is ~\$160K per UCEU (QTY 240 UCEUs). Without procurement of the UCEU, DDG 1000, DDG 1001, and DDG 1002 will be unable to launch all available missiles (e.g.SM-2, ESSM, TLAM, VLA) in the MK 57 VLS inventory and will be unable to consummate Anti-Air Warfare (AAW), self-defense, land attack, and Anti-Submarine Warfare (ASW) engagements.</p> <p>[P40A - 6 / Vertical Launch Systems]: The MK-41 Vertical Launching System (VLS) is a surface combatant missile launching system, designed to store, select and launch various SM configurations, TLAM, Tactical TLAM, ESSM, and VLA. The MK-41 VLS significantly improves missile capacity, flexibility, multi-mission capability, reaction time and rate of fire and is designed to be adaptable to present and future weapon systems. Current configurations are: two 61 cell launchers, forward and aft, for 22 TICONDEROGA (CG 47) Class Cruisers beginning with CG-52; one 61 cell aft and one 29 cell launcher forward for 28 ARLEIGH BURKE (DDG 51) Class Destroyers; and one 64 cell launcher aft and one 32 cell launcher forward for 34 DDG 51 FLT IIA ships.</p> <p>The OPN requirements procure Engineering Change Proposals/Ordnance Alterations (ECP/ORDALT) and funds sustaining engineering support for Fleet investigations and safety issues. Funds are required for Fleet operational availability, capability, safety and survivability. There are no significant increases or decreases in this program.</p> <p>[P40A - 6 / VLS PRODUCTION ENGINEERING]: The OPN requirements procure Engineering Change Proposals/Ordnance Alterations (ECP/ORDALT) and funds sustaining engineering support for Fleet investigations and safety issues. Funds are required for Fleet operational availability, capability, safety and survivability.</p> <p>[P40A - 8 / OTH Weapon System]: FY 2024 decrease due to LCS shipsets for Freedom and independence Class variants completing procurement in FY 2023. No OTH Support due to completion of OHT-WS procurements. FY 2024 supports a total of two OTH-WS LCS installs LCS 32 and LCS 34. The two LCS Independence Class installs that FY24 funding support costs \$3.3M per ship.</p> <p>[P40A - 8 / OTH PROCUREMENT]: FY 2024 decrease due to LCS shipsets for Freedom and independence Class variants completing procurement in FY 2023. No OTH Support due to completion of OHT-WS procurements. FY 2024 supports a total of two OTH-WS LCS installs LCS 32 and LCS 34. The two LCS Independence Class installs that FY24 funding support costs \$3.3M per ship.</p> <p>[P40A - 8 / OTH SUPPORT]: No OTH Support due to completion of OTH-WS procurements.</p> <p>[P40A - 8 / OTH WS INSTALLATION]: FY 2024 decrease due to LCS shipsets for Freedom and independence Class variants completing procurement in FY 2023. No OTH Support due to completion of OHT-WS procurements. FY 2024 supports a total of two OTH-WS LCS installs LCS 32 and LCS 34. The two LCS Independence Class installs that FY24 funding support costs \$3.3M per ship.</p> <p>[P40A - 8 / OTH WS INSTALLATION]: FY 2024 decrease due to LCS shipsets for Freedom and independence Class variants completing procurement in FY 2023.</p>		

UNCLASSIFIED

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment		<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>No OTH Support due to completion of OHT-WS procurements. FY 2024 supports a total of two OTH-WS LCS installs LCS 32 and LCS 34. The two LCS Independence Class installs that FY24 funding support costs \$3.3M per ship.</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy								<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment						<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> N/A			
<b>Line Item MDAP/MAIS Code:</b> 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	NATO SEASPARROW	P-5a			- / 171.945	- / 25.389	- / 28.300	- / 17.079	- / -	- / 17.079
P-40a	RAM GMLS				- / 24.169	- / 0.621	- / 0.521	- / 0.559	- / -	- / 0.559
P-40a	Ship Self Defense System				- / 92.427	- / 19.385	- / 34.462	- / 31.537	- / -	- / 31.537
P-40a	AEGIS Support Equipment				- / 569.536	- / 70.001	- / 113.672	- / 143.172	- / -	- / 143.172
P-40a	MK57 SUPPORT EQUIPMENT	P-5a, P-21			- / 16.873	- / 11.870	- / 11.734	- / -	- / -	- / -
P-40a	Vertical Launch Systems				- / 4.706	- / 0.699	- / 0.746	- / 1.173	- / -	- / 1.173
P-40a	ANTI SHIP MISSILE DECOY SYSTEM	P-5a, P-21			- / 169.079	- / -	- / -	- / -	- / -	- / -
P-40a	OTH Weapon System	P-5a			- / 24.391	- / 6.490	- / 10.103	- / 6.659	- / -	- / 6.659
P-3a	1 / NATO SEASPARROW (NSSMS Mk 57)				- / 77.516	- / 16.881	- / 16.725	- / 16.477	- / 0.000	- / 16.477
P-3a	2 / UR006 RAM MK-49 GMLS ORDALTS (NON-FMP Install)				- / 32.903	- / 6.404	- / 6.532	- / 6.663	- / 0.000	- / 6.663
P-3a	3 / UQ005B - SSDS COTS CONVERSION KITS (TBD)				- / 363.366	- / 63.723	- / 53.837	- / 71.192	- / 0.000	- / 71.192
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 1,546.911</b>	<b>- / 221.463</b>	<b>- / 276.632</b>	<b>- / 294.511</b>	<b>- / 0.000</b>	<b>- / 294.511</b>
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	NATO SEASPARROW	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-40a	RAM GMLS				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	Ship Self Defense System				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	AEGIS Support Equipment				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	MK57 SUPPORT EQUIPMENT	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -
P-40a	Vertical Launch Systems				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	ANTI SHIP MISSILE DECOY SYSTEM	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -
P-40a	OTH Weapon System	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / NATO SEASPARROW (NSSMS Mk 57)				- / 18.951	- / 19.316	- / 19.539	- / 21.639	- / 5.726	- / 212.770
P-3a	2 / UR006 RAM MK-49 GMLS ORDALTS (NON-FMP Install)				- / 6.796	- / 6.999	- / 7.209	- / 7.426	- / 65.839	- / 146.771
P-3a	3 / UQ005B - SSDS COTS CONVERSION KITS (TBD)				- / 77.158	- / 66.513	- / 70.753	- / 69.608	- / 32.436	- / 868.586
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 301.114</b>	<b>- / 304.639</b>	<b>- / 290.458</b>	<b>- / 295.233</b>	<b>Continuing</b>	<b>Continuing</b>
*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.										
<b>Justification:</b> DRAKE: Technical Correction Realigned funds to EOD CREW Budget Exhibit LI 5509.										

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy																Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3						P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment									Aggregated Items Title: NATO SEASPARROW					
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) EQUIPMENT MODERNIZATION - US005																				
1.1) Objective Configuration Engineering	A		-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) MISSILE LAUNCHER UPGRADE	A		-	-	44.177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) PRODUCTION SUPPORT	A		-	-	4.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) LHD UPGRADE (1)	A		-	-	18.346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6) Mk57 Mod 12-15 Modernization (2)	A		-	-	43.314	-	-	10.083	-	-	10.940	-	-	-	-	-	-	-	-	-
1.7) Mk57 Mod 14-17 Modernization (3)	A		-	-	-	-	-	-	-	-	-	-	-	13.715	-	-	-	-	-	13.715
1.8) Launcher Min-Mod BLK 2 Capability Upgrade (4)	A		-	-	6.000	-	-	3.181	-	-	4.267	-	-	3.364	-	-	-	-	-	3.364
1.9) CVN/ LHA Objective Configuration Engineering Upgrade (5)	A		-	-	2.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) EQUIPMENT MODERNIZATION - US005			-	-	128.837	-	-	13.264	-	-	15.207	-	-	17.079	-	-	-	-	-	17.079
2) I-STALKER - US005																				
2.1) I-STALKER PRODUCTION SUPPORT (6)	A		-	-	2.738	-	-	2.751	-	-	1.186	-	-	-	-	-	-	-	-	-
2.2) I-STALKER ENG CHANGE PROPOSALS (7)	A		-	-	4.498	-	-	0.131	-	-	4.361	-	-	-	-	-	-	-	-	-
2.3) I-STALKER SPARES (8)	A		-	-	-	-	-	0.092	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) I-STALKER - US005			-	-	7.236	-	-	2.974	-	-	5.547	-	-	-	-	-	-	-	-	-
3) I-Stalker - US005 (9)																				
3.1) I-Stalker Independent Mount (10)(†)	A		524,285.71	21	11.010	-	-	-	615,000.00	5	3.075	-	-	-	-	-	-	-	-	-
3.4) I-Stalker Install (11)	A		-	-	22.206	-	-	8.722	-	-	4.471	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy</b>															<b>Date:</b> March 2023				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3								<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment							<b>Aggregated Items Title:</b> NATO SEASPARROW				

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)
3.5) I-Stalker SAWS (12)(t)	A		147,555.56	18	2.656	143,000.00	3	0.429	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: 3) I-Stalker - US005</b>			-	-	<b>35.872</b>	-	-	<b>9.151</b>	-	-	<b>7.546</b>	-	-	-	-	-	-	-	-	-
<b>Total</b>			-	-	<b>171.945</b>	-	-	<b>25.389</b>	-	-	<b>28.300</b>	-	-	<b>17.079</b>	-	-	-	-	-	<b>17.079</b>

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

(t) indicates the presence of a P-5a

**Footnotes:**

- (1) This funding line provides the hands on labor required to deliver an Objective Configuration system to the LHD 1 Class ships. To reflect the true cost of an Objective Configuration System this funding has been incorporated into the hardware costs on the P3A. A full up ship cost is now being used in the P3A. This funding has been zeroed out.
- (2) The title of this line has been changed from Objective Configuration to Mk57 Mod 12-15 Modernization. The title Objective Configuration caused confusion in that it was assumed this funding was upgrade support for production of the NSSMS Mk57 Mod 14 Objective Configuration (OC) system. Funding in this line provides for field activity and industry support for efforts associated with the Mk57 Mods 12-15 system. This line will be zeroed out after FY 23 as the MK 12 efforts have been completed. A new line has been added to reflect the ongoing MK 57 Mod 14-17 modernization efforts.
- (3) This line has been added to replace the MK 57 Mod 12-15 after FY 23. This was done to reflect the current population of the systems fielded and work that is being completed as all the hulls post LHD 3 and 5 are a higher configuration.
- (4) With the change in the current Min Mod program technical approach additional engineering is require to provide ESSM Block 2 capability in Functional Compatibility to CVN/LHA/LHD ships. Funding from the hardware and install line has been realigned to support this effort. The line has been changed from Launcher Min-Mod BLK 2 Capability H/W to Launcher Min-Mod BLK 2 Capability Upgrade to better reflect what is being accomplished on this line.
- (5) This line provided funding for Objective Configuration Engineering Upgrade support for the NSSMS MK 57 Mods 14/15 on CVN/LHA ships. This effort consists mainly of Alteration Installation Team (AIT) efforts to remove the Q70s and install new cables and updated software. No additional engineering funding is required after 2019 since installation on the first ship is almost complete and all issues have been addressed.
- (6) I-Stalker Production Support reflects Government oversight of production, Government and Original Equipment Manufacturer (OEM) support of production-related hardware problems, Integrated Logistics Agent (ILA), Acquisition Engineering Agent (AEA), Technical Design Agent (TDA), and Professional Support Services (PSS). Since the FY23 budget request, FY22 and FY23 I-Stalker Production Support increased due to additional requirements for program management and engineering services to support for the preparation and implementation of obsolescence ECP requirements.
- (7) I-Stalker Engineering Change Proposal (ECP) funding requirements (2.1) address several known obsolescence and reliability issues. The system, in its current configuration, cannot be produced until the obsolescence and reliability issues are addressed. Production of new systems is required to support future installs of I-Stalker and to meet the Fleet Urgent Operational Need (UON). Funding supports Non-Recurring (NRE) costs associated with the required engineering changes to address obsolescence issues with the Laser Range Finder (LRF), Visible Sensor (VIS), and Mid-Wave Infrared (MWIR) sensor components of the Sensor Suite. Since the FY23 budget request, FY22 and FY23 ECP funding has been increased to address the growing obsolescence requirements. In FY23, I-Stalker total funding requirements remain split between BLIs 5231 and 2980. Funding for this effort has been realigned to new BLI 2981 beginning in FY24.
- (8) I-Stalker Spares funding requirement (2.3) procures initial spares through Material Support Date (MSD), which is required for installations due to the I-Stalker transition to a Program of Record (POR). FY23 Spares procurements are delayed until ECPs resolve critical hardware obsolescence issues.
- (9) I-Stalker is composed of I-Stalker Independent Mount (3.1), I-Stalker Processing Module (3.2), I-Stalker Sensor Suite (3.3) and I-Stalker SAWS (3.5). The fleet installation schedule has been updated to align with the latest Fleet priorities, resulting in updated hardware procurements and installation requirements.
- (10) Since the FY23 budget request, FY22 Independent Mount (3.1) procurement quantities were reduced to zero due to support increased Production Support and ECP requirements. Additionally, FY23 IM procurement quantities increased from 2 to 5 to support updated fielding plan installations, in alignment with the latest ship availability and deployment schedules. The FY23 IM unit cost has increased to reflect the latest contract option year pricing, which includes adjustments in material and labor costs. For FY22 and prior years, I-Stalker funding is contained in BLI 5231. FY23 total funding requirements remain split between BLIs 5231 and 2980. Funding for this effort has been realigned to new BLI 2981 beginning in FY24.
- (11) I-Stalker installation funding includes funding for Advanced Planning (AP) and Planning Yard Design Services Allocation (DSA), which is required up to two years before the year of installation. DSA funds Ship Installation Drawings (SIDs), Alteration Installation Team (AIT) contracts, and ship-checks. Due to the rapid response nature of the I-Stalker program, installations are planned during a ship's Window of Opportunity (WOO). Install funding is assessed based on the total program requirement. Since the FY23 budget request, the FY22 installation requirement increased due to updated fleet requirements. In FY23, I-Stalker total funding requirements remain split between BLIs 5231 and 2980. Funding for this effort has been realigned to new BLI 2981 beginning in FY24.
- (12) Since the FY23 budget request, the FY22 requirement for I-Stalker SAWS procurements increased due to a batch buy, resulting in a reduced unit price as higher quantities were procured.

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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy								Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3				P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment				Aggregated Items: NATO SEASPARROW				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
3) I-Stalker - US005												
3.1) I-Stalker Independent Mount (10)		2023 <sup>(13)</sup>	BALL / Westminister, CO	SS / FFP	NAVSEA	Mar 2023	Mar 2024	5	615,000.00	Y		Mar 2022
3.5) I-Stalker SAwS <sup>(12)</sup>		2022 <sup>(14)</sup>	NSWC Crane / Crane, Indiana	SS / FFP	CRANE	Jun 2022	Dec 2022	3	143,000.00	Y		Oct 2021

**Footnotes:**  
<sup>(13)</sup> Minor shift in award and delivery date due to late release of funding to the Program Office. FY23 Independent Mount delivery time is 12 months. Delivery time in FY24 and out is 18 months.  
<sup>(14)</sup> Minor shift in award and delivery date due to late release of funding to the Program Office.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3							P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment								Aggregated Items Title: RAM GMLS <sup>(15)</sup>					
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) UR006 RAM MK-49 GMLS ORDALTS <sup>(16)</sup>																				
1.1) UR006 RAM MK-49 GMLS ORDALTS	A		-	-	18.330	-	-	0.621	-	-	0.521	-	-	0.559	-	-	-	-	-	0.559
Subtotal: 1) UR006 RAM MK-49 GMLS ORDALTS			-	-	18.330	-	-	0.621	-	-	0.521	-	-	0.559	-	-	-	-	-	0.559
2) UR901 Systems Improvements																				
2.1) UR901 System Improvement	A		-	-	5.839	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) UR901 Systems Improvements			-	-	5.839	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	24.169	-	-	0.621	-	-	0.521	-	-	0.559	-	-	-	-	-	0.559

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

**Footnotes:**

<sup>(15)</sup> NSWC Port Hueneme provides installation oversight support as the In-Service Engineering Activity (ISEA) for the RAM GMLS system.

<sup>(16)</sup> These funds provide for Guided Missile Launching System (GMLS) production support, systems engineering, logistics and Engineering Change Proposals (ECP) for Ordnance Alteration (ORDALT) instructions as well as information assurance (IA) compliance and safety and Interactive Electronic Technical Manuals (IETM). FY24 funding supports the completion of the Shock ORDALT ECP and on-going production.



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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy																Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3						P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment						Aggregated Items Title: Ship Self Defense System								
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) Ship Self Defense System (SSDS)																				
1.1) UQ002 - SSDS Production Support	A		-	-	11.259	-	-	5.253	-	-	7.835	-	-	9.236	-	-	-	-	-	9.236
1.2) UQ003 - SSDS ECP / SCD	A		-	-	1.414	-	-	0.908	-	-	1.146	-	-	1.299	-	-	-	-	-	1.299
1.3) UQ004 - SSDS Training	A		-	-	5.165	-	-	1.240	-	-	1.117	-	-	1.573	-	-	-	-	-	1.573
1.4) UQ005A - SSDS COTS Eng/ Obsolescence Kits	A		-	-	19.090	-	-	0.662	-	-	0.839	-	-	0.911	-	-	-	-	-	0.911
1.5) UQ007 - Combat System Ship Qualification Trial (CSSQT) <sup>(17)</sup>	A		-	-	39.570	-	-	6.831	-	-	18.242	-	-	13.079	-	-	-	-	-	13.079
1.6) UQ008 - Combat System Documentation & Support <sup>(18)</sup>	A		-	-	15.929	-	-	4.491	-	-	5.283	-	-	5.439	-	-	-	-	-	5.439
Subtotal: 1) Ship Self Defense System (SSDS)			-	-	92.427	-	-	19.385	-	-	34.462	-	-	31.537	-	-	-	-	-	31.537
Total			-	-	92.427	-	-	19.385	-	-	34.462	-	-	31.537	-	-	-	-	-	31.537

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

**Footnotes:**

<sup>(17)</sup> UQ007\*CSSQT Advanced Planning is done in each of the 2 years prior to the conduct of a CSSQT event. SSDS CSSQT Costs in FY23 (total \$18,242K) include: \$ 5,636K for conduct of one CVN CSSQT event; \$ 5,636K for conduct of one LHD CSSQT event; \$4,801K for conduct of one LPD CSSQT event; \$1,452K for Year 2 Advanced Planning for 2 future (FY24) CSSQT events (1 LHD, 1 LPD); \$ 717K for Year 1 Advanced Planning for 2 future (FY26) CSSQT events (1 LHD, 1 LPD); SSDS CSSQT Costs in FY24 (total \$13,079) include: \$ 6,609K for conduct of one LHD CSSQT event; \$ 5,630K for conduct of 1 LPD CSSQT event; \$ 840K for Year 1 Advanced Planning for 2 future (FY26) CSSQT events (1 LHD, 1 LPD); CSSQT cost per year will vary depending on the quantities CSSQT events conducted and the advanced planning required for the quantities of future ships. The cost also varies depending on the mix of ship classes (i.e., CVN, LHD, LHA, LPD, or LSD) in any given year and the CS weapons configuration. CSSQT events cost are significantly higher than advanced planning costs.

<sup>(18)</sup> UQ008 - Combat System Documentation & Waterfront Support provides for generation, update, and validation of CS documentation because of CS configuration changes during ship modernization including Ship Selected Records, Combat System Operational Sequencing System, CS Capabilities and Limitations, Combat System Interface Diagrams, Combat System Alignment Manual and the Overall CS Operability Test. This also includes Combat System Project Engineers that coordinate with other SYSCOM elements for installation coordination and system of system testing with SSDS. CS documentation is produced for all CVN and Amphibious Class Ships undergoing Combat System SSDS MK 2 upgrades.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy																Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3								P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment								Aggregated Items Title: AEGIS Support Equipment <sup>(19)</sup>				
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) Aegis Support Equipment																				
1.1) L7001 - Depot Special Tooling/Test Equipment <sup>(20)</sup>	A		-	-	26.067	-	-	7.990	-	-	9.872	-	-	10.861	-	-	-	-	-	10.861
1.2) L7003 - Integrated Warfare Systems Laboratory	A		-	-	1.317	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) L7006 - Surface Combat Systems Center Equipment	A		-	-	124.282	-	-	3.521	-	-	3.592	-	-	3.664	-	-	-	-	-	3.664
1.4) L7007 - Aegis Training and Readiness Center Upgrade	A		-	-	70.606	-	-	3.120	-	-	3.183	-	-	3.247	-	-	-	-	-	3.247
1.5) L7011 - Aegis Weapon System Ship Change Procurement	A		-	-	84.328	-	-	5.614	-	-	5.909	-	-	6.823	-	-	-	-	-	6.823
1.6) L7012 - SPY 1D/DV Radar Enhancements (ALPS)	A		-	-	64.702	-	-	14.399	-	-	21.200	-	-	21.200	-	-	-	-	-	21.200
1.7) L7014 - SPY Radar Refurbishment (LNA) <sup>(21)</sup>	A		-	-	101.683	-	-	14.668	-	-	31.037	-	-	68.767	-	-	-	-	-	68.767
1.8) L7015 - AEGIS SEARAM Integration and Installation Support	A		-	-	8.256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.9) L7016 - AEGIS TI12H Backfit <sup>(22)</sup>	A		-	-	27.900	-	-	14.100	-	-	14.100	-	-	-	-	-	-	-	-	-
1.10) L7017 - Integrated Combat System Equipment <sup>(23)</sup>	A		-	-	-	-	-	-	-	-	16.500	-	-	20.140	-	-	-	-	-	20.140
1.12) L7600 - Aegis Support Equipment Installation	A		-	-	60.395	-	-	6.589	-	-	8.279	-	-	8.470	-	-	-	-	-	8.470
Subtotal: 1) Aegis Support Equipment			-	-	569.536	-	-	70.001	-	-	113.672	-	-	143.172	-	-	-	-	-	143.172
Total			-	-	569.536	-	-	70.001	-	-	113.672	-	-	143.172	-	-	-	-	-	143.172

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

**Footnotes:**  
<sup>(19)</sup> Provides equipment procurement and installation support for AEGIS Shore Facilities and Shipboard Upgrades to AEGIS Cruisers and Destroyers required to maintain the readiness of the AEGIS Weapon System in support of Combatant Commanders requirements. Combat System Procurements: L7001: Special Tools & Test Equipment, MK-99 and SPY Procurements. L7003: Computers, Displays, and Simulators for Integrated Warfare Systems Laboratory (IWSL) at

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3	<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment	<b>Aggregated Items Title:</b> AEGIS Support Equipment <sup>(19)</sup>
<p>Dahlgren, VA. L7006: Weapon/Combat System Equipment for Surface Combat System Center (SCSC) at Wallops Island, VA. L7007: Weapon/Combat System Equipment for AEGIS Readiness Training Center (ATRC) at Dahlgren, VA. L7011: AEGIS Weapon System Procurements to support Ship Change Documents. L7012: AEGIS Weapon System Procurements to support AEGIS SPY-1D/DV Enhancements for AEGIS DDGs (ALPS). L7014: AEGIS AN/SPY-1 Radar Upgrade to convert 8 LNA Arrays to SPY-1 for fleet Battle Spares. L7015: AEGIS Integration and Installation support for 4 DDG to receive SEARAM upgrade. L7016: AEGIS TI-12H Backfit. L7017: Integrated Combat System (ICS) Equipment. Procures MK 6 MOD X equipment for LBTS and Infrastructure as a Service (IaaS) ORDALT kits for ships. L7027: AEGIS Software License Procurements to support Shore Facilities and In-Service Ship. L7600: AEGIS Installation support for approved ship changes.</p> <p><sup>(20)</sup> L7001 - Depot Special Tooling/Test Equipment: FY24 increases due to efforts associated with MK 99 Sustainment Pool and SPY-1A/B Test Equipment.</p> <p><sup>(21)</sup> L7014: Aegis Baseline (BL) 5.4.1 (BMD 4.2) is a joint effort between Navy and MDA that refurbishes existing DDG AN/SPY-1 radar arrays with the installation of antenna Low Noise Amplifiers (LNAs). The program is being restructured as a result of cost growth, supply chain issues, and schedule delays for the LNA portion of the program. The LNA upgrades are being stopped but the software capability enhancements are being retained. Lockheed Martin is no longer manufacturing the AN/SPY-1 radar, so the option to pull an array from the production line real-time no longer exists. The last DDG 51 FLT IIA with AN/SPY-1 radar arrays has not entered service yet and has a 35 year expected service life. Spare SPY-1 arrays are a necessity. Because of the program restructuring, the \$37.7M increase in FY24 will be used to convert 8 LNA configured SPY-1 arrays back to their normal SPY-1 array configuration for use as fleet battle spares. This effort will assist with diminishing manufacturing source (DMS) issues and contribute to AEGIS wholeness and SPY operational availability.</p> <p><sup>(22)</sup> L7016 - AEGIS TI12H Backfit; FY24 decrease, all planned TI12H procurements will be completed in FY23.</p> <p><sup>(23)</sup> L7017: Integrated Combat System (ICS) Equipment. Procures MK 6 MOD X equipment for combat system Land Based Test Sites and Infrastructure as a Service (IaaS) ORDALT kits. IaaS provides automated and scalable processing, network, storage, and other resources provided to the consumer. It enables the decoupling of hardware (HW) and software (SW), and eliminates the dependencies on specific HW configurations. IaaS enables the use of all available compute, storage, and network resources, while providing capacity for future growth and capability expansion. IaaS is a key component in our transition to an ICS. The MK 6 MOD X compute infrastructure will be developed with an IaaS capability. The IaaS ORDALT kits will enable IaaS capability on legacy TI-16 MK 6 MOD 0 and TI-16 MK 6 MOD 1 compute infrastructures in the fleet today.</p>		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3						P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment									Aggregated Items Title: MK57 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) MK57 Support Equipment																				
1.1) MK57 UCEU PRODUCTION ENGINEERING and LOGISTICS SUPPORT	A		-	-	4.273	-	-	1.270	-	-	0.700	-	-	-	-	-	-	-	-	-
1.2) MK57 UCEU HARDWARE PROCUREMENT (24)(t)	A		157,500.00	80	12.600	132,500.00	80	10.600	137,925.00	80	11.034	-	-	-	-	-	-	-	-	-
Subtotal: 1) MK57 Support Equipment			-	-	16.873	-	-	11.870	-	-	11.734	-	-	-	-	-	-	-	-	-
Total			-	-	16.873	-	-	11.870	-	-	11.734	-	-	-	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.  
(t) indicates the presence of a P-5a

**Footnotes:**  
(24) MK57 VERTICAL LAUNCH SYSTEM (VLS) UNIVERSAL CANISTER ELECTRONICS UNIT(UCEU) PRODUCTION ENGINEERING and LOGISTICS SUPPORT: Funds provided for systems engineering, testing, engineering changes, cyber security accreditation, installation, production support, and hardware. This funding line also provides for development of training curriculum, depot repair procedures, and logistics required to maintain compatibility and interoperability with Total Ship Computing Environment (TSCE) combat system on DDG 1000 Class. MK57 VERTICAL LAUNCH SYSTEM (VLS) UCEU HARDWARE PROCUREMENT: The Independent Government Cost Estimate (IGCE) for MK57 UCEU is ~\$160K per UCEU (QTY 240 UCEUs). Without procurement of the UCEU, DDG 1000, DDG 1001, and DDG 1002 will be unable to launch all available missiles (e.g.SM-2, ESSM, TLAM, VLA) in the MK 57 VLS inventory and will be unable to consummate Anti-Air Warfare (AAW), self-defense, land attack, and Anti-Submarine Warfare (ASW) engagements.

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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy									Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3				P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment					Aggregated Items: MK57 SUPPORT EQUIPMENT			
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) MK57 Support Equipment												
1.2) MK57 UCEU HARDWARE PROCUREMENT <sup>(24)</sup> (†)		2021	Custom Manufacturing & Engineering, Inc. / Pinellas Park, Fl	C / FFP	NAVSEA FIELD ACTIVITY	Mar 2021	Jan 2022	80	157,500.00	N	Jun 2020	Aug 2020
1.2) MK57 UCEU HARDWARE PROCUREMENT <sup>(24)</sup> (†)		2022	Custom Manufacturing & Engineering, Inc. / Pinellas Park, Fl	C / FFP	NAVSEA FIELD ACTIVITY	Nov 2021	Nov 2022	80	132,500.00	Y		
1.2) MK57 UCEU HARDWARE PROCUREMENT <sup>(24)</sup> (†)		2023	Custom Manufacturing & Engineering, Inc. / Pinellas Park, Fl	C / FFP	NAVSEA FIELD ACTIVITY	Oct 2022	Oct 2023	80	137,925.00	Y		

(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2024 Navy																				Date: March 2023																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3										P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment										Aggregated Items: MK57 SUPPORT EQUIPMENT																
Items <i>(Units in Each)</i>							Fiscal Year 2021										Fiscal Year 2022														BALANCE					
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021										Calendar Year 2022																			
							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) MK57 Support Equipment																																				
1.2) MK57 UCEU HARDWARE PROCUREMENT <sup>(24)</sup>																																				
	1	2021	NAVY	80	0	80						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	2	2022	NAVY	80	0	80																A	-	-	-	-	-	-	-	-	-	-	-	-	-	80
	1	2023	NAVY	80	0	80																											80			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						

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Exhibit P-21, Production Schedule: PB 2024 Navy																				Date: March 2023														
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3										P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment										Aggregated Items: MK57 SUPPORT EQUIPMENT														
Items <i>(Units in Each)</i>							Fiscal Year 2023										Fiscal Year 2024													BALANCE				
OCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023										Calendar Year 2024																	
							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) MK57 Support Equipment																																		
1.2) MK57 UCEU HARDWARE PROCUREMENT <sup>(24)</sup>																																		
	1	2021	NAVY	80	80	0																												0
	2	2022	NAVY	80	0	80	-	80																										0
	1	2023	NAVY	80	0	80	A	-	-	-	-	-	-	-	-	-	-	80																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				

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Exhibit P-21, Production Schedule: PB 2024 Navy									Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3					P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment				Aggregated Items: MK57 SUPPORT EQUIPMENT			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2024	1-8-5 For 2024	MAX For 2024	Initial				Reorder			
					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	Custom Manufacturing & Engineering, Inc. - Pinellas Park, Fl			TBD	0	12	0	12	0	0	12	12
2	Custom Manufacturing & Engineering, Inc. - Pinellas Park, Fl			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).



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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3							P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment								Aggregated Items Title: Vertical Launch Systems					
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) Vertical Launch Systems																				
1.1) VLS ORDALTS	A		-	-	3.073	-	-	0.461	-	-	0.475	-	-	0.895	-	-	-	-	-	0.895
1.2) VLS PRODUCTION ENGINEERING	A		-	-	1.250	-	-	0.173	-	-	0.212	-	-	0.219	-	-	-	-	-	0.219
Subtotal: 1) Vertical Launch Systems			-	-	4.323	-	-	0.634	-	-	0.687	-	-	1.114	-	-	-	-	-	1.114
2) 5A5IN Install Equipment N86 <sup>(25)</sup>																				
2.1) 5A5IN Install Equipment N86	A		-	-	0.383	-	-	0.065	-	-	0.059	-	-	0.059	-	-	-	-	-	0.059
Subtotal: 2) 5A5IN Install Equipment N86			-	-	0.383	-	-	0.065	-	-	0.059	-	-	0.059	-	-	-	-	-	0.059
Total			-	-	4.706	-	-	0.699	-	-	0.746	-	-	1.173	-	-	-	-	-	1.173

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

Footnotes:  
<sup>(25)</sup> VLS ORDALT Installation

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy																Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3						P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment										Aggregated Items Title: ANTI SHIP MISSILE DECOY SYSTEM				
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) VV002 - NULKA DECOYS																				
1.1) NULKA DECOYS <sup>(†)</sup>	A		1,477K	65	96.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) VV002 - NULKA DECOYS			-	-	96.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2) VV830 - PRODUCTION ENGINEERING																				
2.1) PRODUCTION ENGINEERING	A		-	-	11.042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) VV830 - PRODUCTION ENGINEERING			-	-	11.042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3) VV004 - ADAP PAYLOAD																				
3.1) ADAP PAYLOAD <sup>(†)</sup>	A		493,547.95	73	36.029	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) VV004 - ADAP PAYLOAD			-	-	36.029	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5) VV003 - ENG CHANGE PROPOSALS (ECPs)/ILS SUPPORT																				
5.1) ECPs	A		-	-	5.184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.2) Logistics/ Production Support	A		-	-	16.721	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) VV003 - ENG CHANGE PROPOSALS (ECPs)/ILS SUPPORT			-	-	21.905	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6) VV001 - NULKA SYSTEMS																				
6.1) DECOY LAUNCHING SYSTEM	A		683,666.67	6	4.102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) VV001 - NULKA SYSTEMS			-	-	4.102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	169.079	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.  
<sup>(†)</sup> indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy									Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3				P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment					Aggregated Items: ANTI SHIP MISSILE DECOY SYSTEM			
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) VV002 - NULKA DECOYS												
1.1) NULKA DECOYS <sup>(†)</sup>		2017	BAES / AUSTRALIA	C / FFP	US Embassy, Canberra	Jun 2018	Aug 2019	21	1,456K	Y		
1.1) NULKA DECOYS <sup>(†)</sup>		2018	BAES / AUSTRALIA	C / FFP	US Embassy, Canberra	Dec 2018	Feb 2020	25	1,235K	Y		
1.1) NULKA DECOYS <sup>(†)</sup>		2019	BAES / AUSTRALIA	C / FFP	US Embassy, Canberra	Dec 2018	Dec 2020	7	1,900K	Y		
3) VV004 - ADAP PAYLOAD												
3.1) ADAP PAYLOAD <sup>(†)</sup>		2016	EXELIS / NJ	C / FFP	Naval Research Lab	Apr 2016	Jun 2018	35	537,970.00	Y		
3.1) ADAP PAYLOAD <sup>(†)</sup>		2017	EXELIS / NJ	C / FFP	Naval Research Lab	Aug 2017	Nov 2019	38	452,632.00	Y		

<sup>(†)</sup> indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2024 Navy																				Date: March 2023															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3										P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment										Aggregated Items: ANTI SHIP MISSILE DECOY SYSTEM															
Items <i>(Units in Each)</i>							Fiscal Year 2016										Fiscal Year 2017										BALANCE								
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016										Calendar Year 2017																		
							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) VV002 - NULKA DECOYS																																			
1.1) NULKA DECOYS																																			
Prior Years Deliveries: 12																																			
	3	2017	NAVY	21	0	21																											21		
	3	2018	NAVY	25	0	25																											25		
	3	2019	NAVY	7	0	7																											7		
3) VV004 - ADAP PAYLOAD																																			
3.1) ADAP PAYLOAD																																			
	4	2016	NAVY	35	0	35							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35				
	4	2017	NAVY	38	0	38																											A -	-	38
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: PB 2024 Navy																				Date: March 2023																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3										P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment										Aggregated Items: ANTI SHIP MISSILE DECOY SYSTEM																					
Items <i>(Units in Each)</i>							Fiscal Year 2018										Fiscal Year 2019										BALANCE														
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT			Calendar Year 2018										Calendar Year 2019																						
							OC T	NO V	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP										
1) VV002 - NULKA DECOYS																																									
1.1) NULKA DECOYS																																									
Prior Years Deliveries: 12																																									
	3	2017	NAVY	21	0	21											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	18							
	3	2018	NAVY	25	0	25																					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	25
	3	2019	NAVY	7	0	7																					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	7
3) VV004 - ADAP PAYLOAD																																									
3.1) ADAP PAYLOAD																																									
	4	2016	NAVY	35	0	35	-	-	-	-	-	-	-	-	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0										
	4	2017	NAVY	38	0	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38										
							OC T	NO V	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP											

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Exhibit P-21, Production Schedule: PB 2024 Navy																				Date: March 2023																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3										P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment															Aggregated Items: ANTI SHIP MISSILE DECOY SYSTEM												
Items <i>(Units in Each)</i>							Fiscal Year 2020															Fiscal Year 2021															BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT				Calendar Year 2020												Calendar Year 2021															
							OC T	NO V	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP							
1) VV002 - NULKA DECOYS																																					
1.1) NULKA DECOYS																																					
Prior Years Deliveries: 12																																					
	3	2017	NAVY	21	3	18	2	2	2	2	1	1	2	2	2	2																0					
	3	2018	NAVY	25	0	25	-	-	-	-	2	3	2	2	2	2	2	2	2	2	2												0				
	3	2019	NAVY	7	0	7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1								0			
3) VV004 - ADAP PAYLOAD																																					
3.1) ADAP PAYLOAD																																					
	4	2016	NAVY	35	35	0																										0					
	4	2017	NAVY	38	0	38	-	2	3	3	4	3	3	4	3	4	3	3	3															0			
							OC T	NO V	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP							

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Exhibit P-21, Production Schedule: PB 2024 Navy									Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3					P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment					Aggregated Items: ANTI SHIP MISSILE DECOY SYSTEM			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2024	1-8-5 For 2024	MAX For 2024	Initial				Reorder				
					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	BAES - AUSTRALIA			192	0	6	12	18	0	0	12	12	
2	EXELIS - NJ			TBD	0	0	12	12	0	0	12	12	
"A" in the Delivery Schedule indicates the Contract Award Date. <b>Note:</b> 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-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3							P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment								Aggregated Items Title: OTH Weapon System					
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) OTH Weapon System <sup>(26)</sup>																				
1.1) OTH PROCUREMENT <sup>(27)(†)</sup>	A		973,000.00	7	6.811	550,782.00	6	3.305	644,424.00	6	3.867	-	-	-	-	-	-	-	-	-
1.2) OTH SUPPORT	A		-	-	0.880	-	-	1.185	-	-	1.109	-	-	-	-	-	-	-	-	-
Subtotal: 1) OTH Weapon System			-	-	7.691	-	-	4.490	-	-	4.976	-	-	-	-	-	-	-	-	-
2) OTH WS INSTALLATION <sup>(28)</sup>																				
2.1) OTH WS INSTALLATION <sup>(29)</sup>	A		-	-	16.700	-	-	2.000	-	-	5.127	-	-	6.659	-	-	-	-	-	6.659
Subtotal: 2) OTH WS INSTALLATION			-	-	16.700	-	-	2.000	-	-	5.127	-	-	6.659	-	-	-	-	-	6.659
Total			-	-	24.391	-	-	6.490	-	-	10.103	-	-	6.659	-	-	-	-	-	6.659

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:**  
<sup>(26)</sup> FY 2024 decrease due to LCS shipsets for Freedom and independence Class variants completing procurement in FY 2023. No OTH Support due to completion of OHT-WS procurements. FY 2024 supports a total of two OTH-WS LCS installs LCS 32 and LCS 34. The two LCS Independence Class installs that FY24 funding support costs \$3.3M per ship.  
<sup>(27)</sup> FY 2024 decrease due to LCS shipsets for Freedom and independence Class variants completing procurement in FY 2023. No OTH Support due to completion of OHT-WS procurements. FY 2024 supports a total of two OTH-WS LCS installs LCS 32 and LCS 34. The two LCS Independence Class installs that FY24 funding support costs \$3.3M per ship.  
<sup>(28)</sup> FY 2024 decrease due to LCS shipsets for Freedom and independence Class variants completing procurement in FY 2023. No OTH Support due to completion of OHT-WS procurements. FY 2024 supports a total of two OTH-WS LCS installs LCS 32 and LCS 34. The two LCS Independence Class installs that FY24 funding support costs \$3.3M per ship.  
<sup>(29)</sup> FY 2024 decrease due to LCS shipsets for Freedom and independence Class variants completing procurement in FY 2023. No OTH Support due to completion of OHT-WS procurements. FY 2024 supports a total of two OTH-WS LCS installs LCS 32 and LCS 34. The two LCS Independence Class installs that FY24 funding support costs \$3.3M per ship.



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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy									Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3				P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment					Aggregated Items: OTH Weapon System			
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) OTH Weapon System												
1.1) OTH PROCUREMENT <sup>(27)</sup>		2019	Raytheon CO / Tucson, AZ	C / FFP	NAVSEA	Oct 2018	Oct 2020	1	2,874K	Y		Feb 2017
1.1) OTH PROCUREMENT <sup>(27)</sup>		2020	Raytheon CO / Tucson, AZ	C / FFP	NAVSEA	Feb 2020	Feb 2022	2	711,914.00	Y		Feb 2017
1.1) OTH PROCUREMENT <sup>(27)</sup>		2021	Raytheon CO / Tucson, AZ	C / FFP	NAVSEA	Mar 2021	Mar 2023	4	628,302.00	Y		Feb 2017
1.1) OTH PROCUREMENT <sup>(27)</sup>		2022	Raytheon CO / Tucson, AZ	C / FFP	NAVSEA	May 2022	May 2024	6	550,782.00	Y		Feb 2017
1.1) OTH PROCUREMENT <sup>(27)</sup>		2023	Raytheon CO / Tucson, AZ	C / FFP	NAVSEA	Mar 2023	Mar 2025	6	644,424.00	Y		Feb 2017

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Exhibit P-3a, Individual Modification: PB 2024 Navy								Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3				P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment					Modification Number / Title: 1 / NATO SEASPARROW			
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 <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	77.516	16.881	16.725	16.477	0.000	16.477	18.951	19.316	19.539	21.639	5.726	212.770
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	77.516	16.881	16.725	16.477	0.000	16.477	18.951	19.316	19.539	21.639	5.726	212.770
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	77.516	16.881	16.725	16.477	0.000	16.477	18.951	19.316	19.539	21.639	5.726	212.770
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Description: Equipment procurements on the P3a												
1. Objective Configuration H/W line supports the NSSMS Mk57 Mod 14 (L class ships) for installation on six LHD 1 class ships. An NSSMS Mk 57 Mod 14 system is comprised of the following:  For LHD 1, 3, 5 - (2) Solid State Transmitter (SSTX), (2) Integrated Radar Processors (IRPs), (2) ESSM ORDALTs and (2) System Launcher Controllers (SLCs) are required for each of those ships.  For LHD 2, 4, 6 - These ships already have the SSTX ORDALT installed, so only (2) Integrated Radar Processors (IRPs), (2) ESSM ORDALTs, and (2) System Launcher Controllers (SLCs) are required for each of those ships.  2. Launcher Min-Mod to BLK 2 H/W line procures equipment required to support the BLK 2 capability on LHA/LHD/CVN Class ships.												

## UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2024 Navy								Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3				P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment				Modification Number / Title: 1 / NATO SEASPARROW					
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: MK 57				Modification Type: NSSMS Mk 57				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 5: Radar Group													
A Kits													
Non-Recurring													
1.1.1) SOLID STATE TRANSMITTER UPGRADE (SSTX) - NonOrganic <sup>(30)</sup>		2 / 4.644	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.644	
1.1.2) INTEGRATED RADAR PROCESSOR (IRP) - NonOrganic		2 / 2.149	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.149	
1.1.3) TEST SUPPORT - Organic		- / 0.030	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.030	
1.1.4) COTS OBSOLESCENCE - Organic		- / 0.296	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.296	
1.1.5) ECP'S - Organic		- / 0.030	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.030	
Subtotal: Non-Recurring		- / 7.149	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 7.149	
Subtotal: Radar Group		4 / 7.149	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 7.149	
Modification Item 2 of 5: Objective Configuration													
A Kits													
Non-Recurring													
2.1.1) Objective Configuration (LHD 1 Class Forward Fit H/W) - NonOrganic <sup>(31)</sup>		3 / 26.055	1 / 14.398	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 40.453	
2.1.2) Objective Configuration H/W (LHA/LHD/CVN) Backfit - NonOrganic <sup>(32)</sup>		2 / 0.405	2 / 0.423	1 / 0.206	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.034	
Subtotal: Non-Recurring		- / 26.460	- / 14.821	- / 0.206	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 41.487	
Subtotal: Objective Configuration		5 / 26.460	3 / 14.821	1 / 0.206	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 41.487	
Modification Item 3 of 5: Launcher Min-Mod to Blk 2													
A Kits													
Non-Recurring													
3.1.1) Launcher Min-Mod Blk 2 Capability H/W - NonOrganic <sup>(33)</sup>		2 / 5.000	- / -	- / -	1 / 1.134	- / -	1 / 1.134	1 / 1.165	1 / 1.196	- / -	1 / 1.268	6 / 9.763	
Subtotal: Non-Recurring		- / 5.000	- / -	- / -	- / 1.134	- / -	- / 1.134	- / 1.165	- / 1.196	- / -	- / 1.268	- / 9.763	
Subtotal: Launcher Min-Mod to Blk 2		2 / 5.000	- / -	- / -	1 / 1.134	- / -	1 / 1.134	1 / 1.165	1 / 1.196	- / -	1 / 1.268	6 / 9.763	
Modification Item 4 of 5: MK9 Mod 2 CWTI Enhancement H/W Procurement													
A Kits													
Non-Recurring													

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Exhibit P-3a, Individual Modification: PB 2024 Navy								Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3			P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment					Modification Number / Title: 1 / NATO SEASPARROW				
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:						
Models of Systems Affected: MK 57			Modification Type: NSSMS Mk 57					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)
4.1.1) Mk9 Mod 2 CWTI Enhancement H/W Procurement - NonOrganic <sup>(34)</sup>	- / -	- / -	2 / 9.114	2 / 9.250	- / -	2 / 9.250	4 / 15.941	4 / 16.063	4 / 17.837	4 / 18.037	- / -	20 / 86.242
Subtotal: Non-Recurring	- / 0.000	- / -	- / 9.114	- / 9.250	- / -	- / 9.250	- / 15.941	- / 16.063	- / 17.837	- / 18.037	- / 0.000	- / 86.242
Subtotal: MK9 Mod 2 CWTI Enhancement H/W Procurement	- / -	- / -	2 / 9.114	2 / 9.250	- / -	2 / 9.250	4 / 15.941	4 / 16.063	4 / 17.837	4 / 18.037	- / -	20 / 86.242
Modification Item 5 of 5: Launcher Group												
B Kits												
Non-Recurring												
5.1.1) ESSM ORDALT - NonOrganic	10 / 2.542	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.542
5.1.2) SYSTEM LAUNCHER/CONTROLLER (SLC) - NonOrganic	10 / 2.148	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.148
5.1.3) TEST SUPPORT - Organic	- / 0.030	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.030
5.1.4) ECP'S - Organic	- / 0.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.260
5.1.5) Launcher Support - Organic <sup>(35)</sup>	- / 2.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.940
5.1.6) Radar Support - Organic <sup>(36)</sup>	- / 1.990	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.990
Subtotal: Non-Recurring	- / 9.910	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 9.910
Subtotal: Launcher Group	20 / 9.910	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 9.910
Subtotal: Procurement, All Modification Items	- / 48.519	- / 14.821	- / 9.320	- / 10.384	- / -	- / 10.384	- / 17.106	- / 17.259	- / 17.837	- / 19.305	- / 0.000	- / 154.551
Support (All Modification Items)												
6.1) Obsolescence <sup>(37)</sup>	- / 0.958	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.958
7.1) Radar Support	- / 1.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.900
8.1) Launcher Support	- / 2.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.940
Subtotal: Support	- / 5.798	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 5.798
Installation												
Modification Item 1 of 5: Radar Group	- / 5.543	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 5.543
Modification Item 2 of 5: Objective Configuration	- / 10.800	- / 2.060	- / 7.405	- / 5.283	- / 0.000	- / 5.283	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 25.548
Modification Item 3 of 5: Launcher Min-Mod to Blk 2	- / 2.000	- / 0.000	- / 0.000	- / 0.810	- / 0.000	- / 0.810	- / 0.527	- / 0.542	- / 0.000	- / 0.632	- / 0.000	- / 4.511
Modification Item 4 of 5: MK9 Mod 2 CWTI Enhancement H/W Procurement	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.318	- / 1.515	- / 1.702	- / 1.702	- / 5.726	- / 11.963
Modification Item 5 of 5: Launcher Group	- / 4.856	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.856
Subtotal: Installation	- / 23.199	- / 2.060	- / 7.405	- / 6.093	- / -	- / 6.093	- / 1.845	- / 2.057	- / 1.702	- / 2.334	- / 5.726	- / 52.421
Total												

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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3				P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment						Modification Number / Title: 1 / NATO SEASPARROW			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: MK 57				Modification Type: NSSMS Mk 57					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 Cost (Procurement + Support + Installation)	77.516	16.881	16.725	16.477	0.000	16.477	18.951	19.316	19.539	21.639	5.726	212.770	

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Exhibit P-3a, Individual Modification: PB 2024 Navy											Date: March 2023																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3										P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment										Modification Number / Title: 1 / NATO SEASPARROW											
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:																
Modification Item 1 of 5: Radar Group																															
Manufacturer Information																															
Manufacturer Name: NSWC Port Hueneme Division														Manufacturer Location: Oxnard CA																	
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		Jul 2022				Jul 2023				Jul 2024																					
Delivery Dates		Jul 2022				Jul 2023				Jul 2024																					
Installation Information																															
Method of Implementation: Alteration Installation Team (AIT):: Installation Name: SOLID STATE TRANSMITTER UPGRADE (SSTX)																															
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 / 4.644		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		2 / 4.644							
FY 2022		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2023		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		2 / 4.644		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		2 / 4.644							
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	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Method of Implementation: Alteration Installation Team (AIT):: Installation Name: Objective Configuration (CVN/LHA/LHD Backfit)																															
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 / 0.899		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		2 / 0.899							

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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3					P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment					Modification Number / Title: 1 / NATO SEASPARROW																					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:																					
Modification Item 1 of 5: Radar Group																															
Installation Information																															
Method of Implementation: Alteration Installation Team (AIT):: Installation Name: Objective Configuration (CVN/LHA/LHD Backfit																															
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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
Total	2 / 0.899	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.899																			
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	
Out	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy											<b>Date:</b> March 2023																				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3					<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment						<b>Modification Number / Title:</b> 1 / NATO SEASPARROW																				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																				
<b>Modification Item 2 of 5:</b> Objective Configuration																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Raytheon											Manufacturer Location: Portsmouth RI																				
Administrative Leadtime (in Months): 3											Production Leadtime (in Months): 24																				
<b>Dates</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>																								
Contract Dates	Jul 2022	Jul 2023	Jul 2024																												
Delivery Dates	Jul 2022	Jul 2023	Jul 2024																												
<b>Installation Information</b>																															
<b>Method of Implementation:</b> AIT:: Installation Name: Objective Configuration (LHD 1 Class Forward Fit H/W)																															
<b>Installation Cost</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>																			
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 8.800	- / -	1 / 3.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 11.900																			
FY 2022	- / -	- / -	- / -	1 / 3.000	0 / 0.000	1 / 3.000	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.000																			
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
Total	2 / 8.800	- / -	1 / 3.100	1 / 3.000	0 / 0.000	1 / 3.000	- / -	- / -	- / -	- / -	0 / 0.000	4 / 14.900																			
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	2	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Out	2	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
<b>Method of Implementation:</b> Alteration Installation Team (AIT):: Installation Name: Objective Configuration (LHD 1 Class Forward																															
<b>Installation Cost</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>																			
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 2.000	1 / 2.060	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.060																			



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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3										<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment										<b>Modification Number / Title:</b> 1 / NATO SEASPARROW											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 2 of 5:</b> Objective Configuration																															
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Alteration Installation Team (AIT):: Installation Name: Objective Configuration (LHD 1 Class Forward)																															
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>																		
		<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>																	
FY 2022		- / -	- / -	2 / 4.305	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.305																		
FY 2023		- / -	- / -	- / -	1 / 2.283	0 / 0.000	1 / 2.283	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.283																		
FY 2024		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2025		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2026		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2027		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2028		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
To Complete		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
Total		1 / 2.000	1 / 2.060	2 / 4.305	1 / 2.283	0 / 0.000	1 / 2.283	- / -	- / -	- / -	- / -	0 / 0.000	5 / 10.648																		
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	1	-	1	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Out	-	-	-	1	-	1	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5

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Exhibit P-3a, Individual Modification: PB 2024 Navy											Date: March 2023																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3										P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment										Modification Number / Title: 1 / NATO SEASPARROW											
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:																
Modification Item 3 of 5: Launcher Min-Mod to Blk 2																															
Manufacturer Information																															
Manufacturer Name: NSWC Port Hueneme Division														Manufacturer Location: Oxnard CA																	
Administrative Leadtime (in Months): 1														Production Leadtime (in Months): 6																	
Dates		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
Contract Dates		Jul 2022				Jul 2023				Jan 2024				Jan 2025				Jan 2026								Jan 2028					
Delivery Dates		Jul 2022				Jul 2023				Jul 2024				Jul 2025				Jul 2026								Jul 2029					
Installation Information																															
Method of Implementation: ALT:: Installation Name: Launcher Min-Mod Blk 2 Capability H/W																															
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 / 2.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		2 / 2.000							
FY 2022		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2023		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2024		- / -		- / -		- / -		1 / 0.810		0 / 0.000		1 / 0.810		- / -		- / -		- / -		- / -		0 / 0.000		1 / 0.810							
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.527		- / -		- / -		- / -		0 / 0.000		1 / 0.527							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.542		- / -		- / -		0 / 0.000		1 / 0.542							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.632		0 / 0.000		1 / 0.632							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		2 / 2.000		- / -		- / -		1 / 0.810		0 / 0.000		1 / 0.810		1 / 0.527		1 / 0.542		- / -		1 / 0.632		0 / 0.000		6 / 4.511							
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	-	-	-	-	
Out	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	1	-	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3										<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment										<b>Modification Number / Title:</b> 1 / NATO SEASPARROW											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 4 of 5:</b> MK9 Mod 2 CWTI Enhancement H/W Procurement																															
<b>Installation Information</b>																															
<b>Method of Implementation:</b> AIT:: Installation Name: Mk9 Mod 2 CWTI Enhancement H/W Procurement																															
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>																		
		<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>																	
Prior Years		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2022		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2023		- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.318	- / -	- / -	- / -	0 / 0.000	2 / 1.318																		
FY 2024		- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.515	- / -	- / -	0 / 0.000	2 / 1.515																		
FY 2025		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.702	- / -	0 / 0.000	4 / 1.702																		
FY 2026		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.702	0 / 0.000	4 / 1.702																		
FY 2027		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.766	4 / 2.766																		
FY 2028		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.960	4 / 2.960																		
To Complete		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
Total		- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.318	2 / 1.515	4 / 1.702	4 / 1.702	8 / 5.726	20 / 11.963																		
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	4	-	-	-	-	4	-	-	8	20
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	4	-	-	-	-	12	20

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy											<b>Date:</b> March 2023																				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3					<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment					<b>Modification Number / Title:</b> 1 / NATO SEASPARROW																					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>																				
<b>Modification Item 5 of 5:</b> Launcher Group																															
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Alteration Installation Team (AIT):: Installation Name: ESSM ORDALT																															
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>																		
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 2.621	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 2.621																		
FY 2022		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2023		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2024		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2025		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2026		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2027		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2028		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
To Complete		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
Total		10 / 2.621	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 2.621																		
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
<b>Method of Implementation:</b> Alteration Installation Team:: Installation Name: SYSTEM LAUNCHER/CONTROLLER (SLC)																															
<b>Installation Cost</b>		<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>																		
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 2.235	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 2.235																		
FY 2022		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2023		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2024		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2025		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2026		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2027		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2028		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
To Complete		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3										<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment										<b>Modification Number / Title:</b> 1 / NATO SEASPARROW											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 5 of 5:</b> Launcher Group																															
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Alteration Installation Team:: Installation Name: SYSTEM LAUNCHER/CONTROLLER (SLC)																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>		<b>FY 2025</b>		<b>FY 2026</b>		<b>FY 2027</b>		<b>FY 2028</b>		<b>To Complete</b>		<b>Total</b>							
		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>		<i>Qty (Each) / Total Cost (\$ M)</i>							
Total		10 / 2.235		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		10 / 2.235							
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
<p><b>Footnotes:</b></p> <p><sup>(30)</sup> Starting in FY 18 a new procurement/upgrade strategy will be used. Contracting for Ordalt kits/equipment Components and refurbishment/upgrade of equipment will no longer be accomplished separately. NSWC PHD will award one contact to deliver a fully upgraded System that includes Ordalt kits/equipment components and refurbishment/upgrade. The Radar Group (1.1.1 - 1.1.5) and Launcher Group (2.1.1 - 2.1.4) costs have been rolled into the 5.1.1 Objective Configuration H/W line.</p> <p><sup>(31)</sup> Funding in FY 2022 planned for upgrade on the LHD 3. Higher Objective Configuration costs is the result of receiving more refined cost estimates. Proposals for like equipment received from hardware manufacturer. LHD 3 planned for installation in FY 23.</p> <p><sup>(32)</sup> This line provides funding for NSSMS MK 57 Mods 14/15 Objective Configuration Upgrades on CVN/LHD class ships. This effort consists mainly of Alteration Installation Team (AIT) efforts to remove the Q70s and install new cables and install updated software. This effort has very small hardware requirements.</p> <p><sup>(33)</sup> With the change in current Min Mod program technical approach which requires additional engineering and less hardware the hardware/install funding lines have been reduced. This funding has been realigned to the P40 Min Mod Engineering line to support the increased engineering effort. The hardware funding in FY 22 was not moved since this is in an execution year however hardware planned will not be procured. A reduction will be shown in future budget submission.</p> <p><sup>(34)</sup> The name has been change to provide the nomenclature for this effort. Amphibious ships require two MK9s and Carriers requires 4 MK 9s.</p> <p><sup>(35)</sup> Starting in FY 18 a new procurement/upgrade strategy will be used. Contracting for Ordalt kits/equipment Components and refurbishment/upgrade of equipment will no longer be accomplished separately. NSWC PHD will award one contact to deliver a fully upgraded System that includes Ordalt kits/equipment components and refurbishment/upgrade. This line has been zeroed out. Funding is now part of the Objective Configuration H/W line.</p> <p><sup>(36)</sup> Starting in FY 18 a new procurement/upgrade strategy will be used. Contracting for Ordalt kits/equipment Components and refurbishment/upgrade of equipment will no longer be accomplished separately. NSWC PHD will award one contact to deliver a fully upgraded System that includes Ordalt kits/equipment components and refurbishment/upgrade. This line has been zeroed out. Funding is now part of the Objective Configuration H/W line.</p> <p><sup>(37)</sup> Funding will be used to address numerous obsolescence issues with the NATO Seasparrow Surface Missile System (NSSMS) that will allow deliver of the Objective Configuration systems to the LHD 3 and LHD 5 in FY 23/24.</p>																															

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3	<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment	<b>Modification Number / Title:</b> 2 / UR006 RAM MK-49 GMLS ORDALTS

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 <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	32.903	6.404	6.532	6.663	0.000	6.663	6.796	6.999	7.209	7.426	65.839	146.771
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	32.903	6.404	6.532	6.663	0.000	6.663	6.796	6.999	7.209	7.426	65.839	146.771
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	32.903	6.404	6.532	6.663	0.000	6.663	6.796	6.999	7.209	7.426	65.839	146.771
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The MK-31 Guided Missile Weapon System (GMWS) is a lightweight, quick-reaction, high firepower missile system designed to provide anti-ship missile defense. The system is comprised of a MK- 44 Guided Missile Round Pack (GMRP) and the MK 49 GMLS, which holds 21 RAM missiles. The 21-round launcher is compatible with various platforms ranging from large USN aircraft carriers to Littoral Combat Ship (LCS). This system is designed to counter high-density anti-ship, cruise missile raids and provide for ship survivability with accurate terminal guidance, proven lethality and no fire control illumination dependence.

Funding supports the hardware procurement and installation of Ordnance Alterations (ORDALT) to address safety, obsolescence, and enable the firing of new missile variants. Hardware production lead time is 24 months and installations are executed in accordance with Ship Maintenance Availability Schedules. FY24 changes address a shock deficiency issue discovered during shipboard testing. The FY24 procurement of the Shock and Firepower ORDALTs will add the firepower capability increasing the number ships capable of fully employing the RAM Block 2B missile to meet self-defense probability of raid annihilation (PRA) requirements against evolving threat raid scenarios. The Firepower ORDALT also supports launcher readiness due to the obsolescence of multiple components in the current configuration. The Shock ORDALT will address safety deficiencies identified during testing and eliminate restrictions on the launcher that could render the launcher inoperable in the event of a major ship shock event.

FY24 funding provides for procurement of four Shock ORDALTs and four Firepower ORDALTs and installation of 10 previously procured Firepower ORDALTs.

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LI 5231 - Ship Missile Support Equipment  
Navy

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Exhibit P-3a, Individual Modification: PB 2024 Navy											Date: March 2023																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3										P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment										Modification Number / Title: 2 / UR006 RAM MK-49 GMLS ORDALTS											
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:																
Modification Item 1 of 1: UR006 RAM MK-49 GMLS ORDALTS																															
Manufacturer Information																															
Manufacturer Name: Raytheon Co														Manufacturer Location: Tucson AZ																	
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 2021				Dec 2022				Dec 2023				Dec 2024				Dec 2025				Dec 2026				Dec 2027					
Delivery Dates		Dec 2023				Dec 2024				Dec 2025				Dec 2026				Dec 2027				Dec 2028				Dec 2029					
Installation Information																															
Method of Implementation: NON-FMP Install:: Installation Name: UR006 RAM MK-49 GMLS ORDALTS																															
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 / 8.914		10 / 1.500		10 / 1.530		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		55 / 11.944							
FY 2022		- / -		- / -		- / -		10 / 1.561		0 / 0.000		10 / 1.561		- / -		- / -		- / -		- / -		0 / 0.000		10 / 1.561							
FY 2023		- / -		- / -		- / -		- / -		- / -		- / -		10 / 1.592		- / -		- / -		- / -		0 / 0.000		10 / 1.592							
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		- / -		8 / 1.639		- / -		- / -		0 / 0.000		8 / 1.639							
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		8 / 1.688		- / -		0 / 0.000		8 / 1.688							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		8 / 1.739		0 / 0.000		8 / 1.739							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		8 / 1.790		8 / 1.790							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		8 / 1.840		8 / 1.840							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		33 / 10.006		33 / 10.006							
Total		35 / 8.914		10 / 1.500		10 / 1.530		10 / 1.561		0 / 0.000		10 / 1.561		10 / 1.592		8 / 1.639		8 / 1.688		8 / 1.739		49 / 13.636		148 / 33.799							
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	35	-	-	10	-	-	-	10	-	-	-	10	-	-	-	10	-	-	-	8	-	-	-	8	-	-	-	8	-	49	148
Out	35	-	-	-	10	-	-	-	10	-	-	-	10	-	-	-	10	-	-	-	8	-	-	-	8	-	-	-	8	49	148
Footnotes:																															
<sup>(38)</sup> FY22 and FY23 procurements are for the Block 2B Firepower ORDALTS that will add the firepower capability increasing the number ships capable of fully employing the RAM Block 2B missile to meet self-defense probability of raid annihilation (PRA) requirements against evolving threat raid scenarios. The Firepower ORDALT also supports launcher readiness due to the obsolescence of multiple components in the current configuration. The FY24 procurement is for the Shock and Firepower ORDALTS. The Shock ORDALT will address safety deficiencies identified during testing and eliminate restrictions on the launcher that could render the launcher inoperable in the event of a major ship shock event.																															



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Exhibit P-3a, Individual Modification: PB 2024 Navy							Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3				P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment				Modification Number / Title: 3 / UQ005B - SSDS COTS CONVERSION 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)	363.366	63.723	53.837	71.192	0.000	71.192	77.158	66.513	70.753	69.608	32.436	868.586
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	363.366	63.723	53.837	71.192	0.000	71.192	77.158	66.513	70.753	69.608	32.436	868.586
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	363.366	63.723	53.837	71.192	0.000	71.192	77.158	66.513	70.753	69.608	32.436	868.586
(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:												
<p>FY 2020-FY 2023 includes the procurement of COTS Conversion Kits for CVNs, LPDs, LHDs, LHAs and LSDs, as well as COTS Upgrade Kits/field changes for the shore sites used for SSDS software development/ maintenance, training, and Combat System integration and certification testing. SSDS procurement also includes various Commercial off the Shelf (COTS) based systems and equipment used within the integrated combat system.</p> <p>The COTS conversion kits replace obsolete COTS hardware and support the integration of new CS elements and capabilities. SSDS is currently procuring TI-16TR hardware and computing infrastructure kits. FY 2023 starts the transition to the Computing Infrastructure (CI) configuration for ship system procurements.</p> <p>The budget cost estimates for the procurement and installation of the kits vary depending on the specific ship class (CVNs, LPDs, LSDs, LHAs, and LHDs), and the existing configuration of the ship.</p> <p>The SSDS OPN UQ005 supports field changes to the in-service baselines, and the establishment of new baseline configurations at the shore sites. The cost for the kits varies significantly depending on the site, its existing configuration, and mission of the site. This includes procurement of hardware components for CAC2S Afloat. The SSDS procurement includes TI-16 TR and CI equipment for the competitive CSEA contract for continuing the development of the SSDS MK 2 Build 12 baseline. Schedule changes are attributed to the Fleet changing ship modernization schedules to address operational requirements.</p> <p>The Program office over the 2022 budget cycle refined the Hardware and Software procurement costs and timelines. Additionally, all cost codes were evaluated to ensure tasking was accurately reported in the correct cost code. Starting in FY22 and out years, these refinements in lead times, costs, and cost code reporting have been implemented. Part of this refinement now documents software being procured over multiple years to account for the build of the tactical software load, procurement of software licenses (ie Red Hat, High Speed Guard) and annual software license renewals and certification. Additional, this refinement documents the final installation checkout activities. In FY22 Cyber Security costs have been moved to UA005A cost code. In FY23, procurements are starting to transition from TI-16 TR configuration to the new Computing Infrastructure (CI) configuration. This transition impacts cost for hardware, installation and advanced planning. The lead ship class will be the LPDs for the new CI configuration. Cost will vary based on the new CI configuration.</p>												
SSDS FY23 unit costs are:												
\$ 19,743K for (2) LPD TI-16 TR COTS Conversion Computing Infrastructure Kits												
\$ 9,558K for (1) Shore Site (CI)												
\$ 2,787K for SW tactical build, SW licenses, annual SW licenses and certification												
\$ 3,748K for CAC2S												
Total Cost for 2 ship System and 1 shore site units including SW & CAC2S Afloat in FY23 (UQ005B) is \$35,836K												
SSDS Ship Installation Costs in FY23 (total \$14,648K) include:												
\$ 10,454K for AIT/DSA for installation of (1) LHD Kit (TI-16 TR)												

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3	<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment	<b>Modification Number / Title:</b> 3 / UQ005B - SSDS COTS CONVERSION KITS
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
<p>\$ 1,416K for final checkout on 2 Ships (1 LHD, 1 LPD)            \$ 2,778K for Year 2 advanced planning/DSA* for 1 future (FY24) hull (1 LPD) and Year 1 Advanced Planning/DSA* for 2 future (FY25) Hulls (1 CVN, 1 LPD)</p> <p>SSDS Shore Installation Costs in FY23 (total \$3,353K) include:            \$ 811K for 2 Shore Site installation            \$ 2,542K for Advanced planning for 1 future (FY24) shore Site installation</p> <p>SSDS FY24 unit costs are:            \$ 30,631K for (1) CVN and (1) LHD TI-16 TR COTS Conversion Computing Infrastructure Kits            \$ 11,207K for (1) Shore Site (CI)            \$ 10,861K for SW tactical build, SW licenses, annual SW licenses and certification            \$ 5,210K for CAC2S            Total Cost for 2 ship System and 1 shore site units including SW &amp; CAC2S Afloat in FY24 (UQ005B) is \$57,909K</p> <p>SSDS Ship Installation Costs in FY24 (total \$10,158K) include:            \$ 6,855K for AIT/DSA for installation of (1) LPD Kit (TI-16 TR)            \$ 759K for final checkout on 1 Ship (1 LHD)            \$ 847K for Year 2 advanced planning/DSA* for 2 future (FY25) hull (LPD, CVN)            \$ 1,697K and Year 2 Advanced Planning/DSA* for 2 future (FY26) Hulls (LHD, LPD)</p> <p>SSDS Shore Installation Costs in FY24 (total \$3,125K) include:            \$ 430K for 1 Shore Site installation            \$ 2,695K for Advanced planning for 1 future (FY25) shore Site installation</p> <p>*Advanced Planning is done in each of the 2 years prior to an installation. Installation funds are required to be on contract and at field activities 90-150 days prior to installation start.</p> <p>Note: SSDS cost have been increasing. This is primarily the transition to the new Computing Infrastructure configuration. In addition, increased cost are attributed to supply chain issues, implementation of required engineering changes to address hardware component obsolescence and diminishing manufacturing sourcing issues. Price increases are reflected starting in FY 2021 and outyear hardware costs.</p> <p>Ship Installation Cost, which includes advanced planning, will vary per year depending on the quantities of ships, the mix of ship classes, the configuration of the specific hull (i.e., CVN, LHD, LHA, LPD, or LSD) and the geographical location of the CNO availability (e.g., Bremerton, Norfolk, San Diego). Installation funds are required to be on contract and at field activities 90-150 days prior to installation start. Installation cost is significantly higher than advanced planning. This can cause large variations between years. Recently, the installation cost has been increasing due to a) installations in non-traditional locations (e.g., Bremerton) driven by the Coast-wide bid process which causes extensive travel costs, b) Delays in delivery of Ship Installation Drawings, and c) scope changes during the modernization window. Further apparent cost increases are due to aligning modernization-related work such as Combat System documentation updates within the modernization budget.</p> <p>[UQ5IN FMP SHIP UNITS] The cost for each kit is listed above. SSDS kit funding is provided to various contractors and field activities. The SSDS equipment procurement is based on competitive contracts. Production lead time for kits ranges from 12 months (for equipment COTS upgrade kits/field changes) up to 24 months for system COTS conversion kits for ships and shore sites.</p> <p>[UQ6IN NON FMP SHORE SITES] The non-FMP kits are required for SSDS/CS shore sites: The SSDS MK 2 System/Software Combat System Engineering Agent; SCSC Wallops Island, maintenance and operator training equipment at the Center for Surface Combat Systems (CSCS), Dam Neck, Virginia; the Self Defense Test Ship (SDTS) and the SSDS System Integration Lab (SIL), Lockheed Martin, Moorestown, New Jersey. Each of these facilities require equipment to support the in-service ship configurations, and to support the new configuration baselines in development. The SSDS OPN UQ005 supports field changes to the in-service baselines, and the establishment of new baseline configurations at the shore sites. The cost for the kits varies significantly depending on the site, its existing configuration, and mission of the site.</p>		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3	<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment	<b>Modification Number / Title:</b> 3 / UQ005B - SSDS COTS CONVERSION KITS
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

[UQ5IN FMP SHIP UNITS] The cost for each kit is listed above. SSDS kit funding is provided to various contractors and field activities. The SSDS equipment procurement is based on competitive contracts. Production lead time for kits ranges from 12 months (for equipment COTS upgrade kits/field changes) up to 24 months for system COTS conversion kits for ships and shore sites.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3				<b>P-1 Line Item Number / Title:</b> 5231 / Ship Missile Support Equipment						<b>Modification Number / Title:</b> 3 / UQ005B - SSDS COTS CONVERSION KITS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> [No Model Specified]				<b>Modification Type:</b> TBD				<b>Related RDT&amp;E PEs:</b>					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>	
	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	
<b>Procurement</b>													
<i>Modification Item 1 of 1:</i> UQ005B - SSDS COTS CONVERSION KITS													
B Kits													
Recurring													
1.1.1) UQ5IN FMP SHIP UNITS - NonOrganic	17 / 120.032	1 / 22.893	2 / 26.278	2 / 46.702	- / -	2 / 46.702	1 / 28.727	1 / 23.010	2 / 45.537	1 / 29.168	- / -	27 / 342.347	
1.1.2) UQ6IN NON FMP SHORE SITES - NonOrganic	18 / 104.192	2 / 19.543	1 / 9.558	1 / 11.207	- / -	1 / 11.207	1 / 12.542	2 / 20.793	1 / 11.453	1 / 13.286	- / -	27 / 202.574	
<i>Subtotal: Recurring</i>	- / 224.224	- / 42.436	- / 35.836	- / 57.909	- / -	- / 57.909	- / 41.269	- / 43.803	- / 56.990	- / 42.454	- / 0.000	- / 544.921	
<i>Subtotal: UQ005B - SSDS COTS CONVERSION KITS</i>	35 / 224.224	3 / 42.436	3 / 35.836	3 / 57.909	- / -	3 / 57.909	2 / 41.269	3 / 43.803	3 / 56.990	2 / 42.454	- / -	54 / 544.921	
<i>Subtotal: Procurement, All Modification Items</i>	- / 224.224	- / 42.436	- / 35.836	- / 57.909	- / -	- / 57.909	- / 41.269	- / 43.803	- / 56.990	- / 42.454	- / 0.000	- / 544.921	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> UQ005B - SSDS COTS CONVERSION KITS	- / 139.142	- / 21.287	- / 18.001	- / 13.283	- / 0.000	- / 13.283	- / 35.889	- / 22.710	- / 13.763	- / 27.154	Continuing	Continuing	
<i>Subtotal: Installation</i>	- / 139.142	- / 21.287	- / 18.001	- / 13.283	- / -	- / 13.283	- / 35.889	- / 22.710	- / 13.763	- / 27.154	Continuing	Continuing	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>363.366</b>	<b>63.723</b>	<b>53.837</b>	<b>71.192</b>	<b>0.000</b>	<b>71.192</b>	<b>77.158</b>	<b>66.513</b>	<b>70.753</b>	<b>69.608</b>	<b>32.436</b>	<b>868.586</b>	

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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3										P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment										Modification Number / Title: 3 / UQ005B - SSDS COTS CONVERSION KITS											
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:																
Modification Item 1 of 1: UQ005B - SSDS COTS CONVERSION KITS																															
Manufacturer Information																															
Manufacturer Name: TBD (Competitive Procurement)															Manufacturer Location: TBD (Competitive Procurement)																
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		Jan 2022				Jan 2023				Jan 2024				Jan 2025				Jan 2026				Jan 2027				Jan 2028					
Delivery Dates		Jun 2023				Jan 2024				Apr 2025				Apr 2026				Apr 2027				Apr 2028				Apr 2029					
Installation Information																															
Method of Implementation: [none specified]:: Installation Name: UQ5IN FMP SHIP UNITS - 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		15 / 121.535		2 / 16.608		0 / 1.416		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		17 / 139.559							
FY 2022		0 / 3.533		0 / 1.786		1 / 10.454		0 / 0.759		0 / 0.000		0 / 0.759		- / -		- / -		- / -		- / -		0 / 0.000		1 / 16.532							
FY 2023		- / -		- / -		0 / 1.538		1 / 7.536		0 / 0.000		1 / 7.536		1 / 8.487		0 / 0.692		- / -		- / -		0 / 0.000		2 / 18.253							
FY 2024		- / -		- / -		0 / 1.240		0 / 1.022		0 / 0.000		0 / 1.022		1 / 22.207		1 / 11.027		0 / 0.781		- / -		0 / 0.000		2 / 36.277							
FY 2025		- / -		- / -		- / -		0 / 0.841		0 / 0.000		0 / 0.841		0 / 0.759		1 / 6.251		0 / 0.781		- / -		0 / 0.000		1 / 8.632							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.938		0 / 0.621		1 / 7.053		0 / 1.064		0 / 0.000		1 / 9.676							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 1.220		0 / 1.514		1 / 21.204		1 / 23.619		2 / 47.557							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 1.180		1 / 9.817		1 / 10.997							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		15 / 125.068		2 / 18.394		1 / 14.648		1 / 10.158		0 / 0.000		1 / 10.158		2 / 32.391		2 / 19.811		1 / 10.129		1 / 23.448		2 / 33.436		27 / 287.483							
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	15	-	1	-	-	-	-	1	-	-	-	2	-	-	1	-	1	-	-	-	2	-	-	-	-	-	1	-	-	3	27
Out	15	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	1	-	-	1	1	-	-	1	1	-	-	-	4	27

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Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3	P-1 Line Item Number / Title: 5231 / Ship Missile Support Equipment	Modification Number / Title: 3 / UQ005B - SSDS COTS CONVERSION KITS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: UQ005B - SSDS COTS CONVERSION KITS
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Installation Information
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Method of Implementation: Method:: Installation Name: UQ6IN NON FMP SHORE SITES - INSTALLATION
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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 / 14.074	1 / 0.588	1 / 0.402	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	18 / 15.064
FY 2022	- / -	0 / 2.305	2 / 0.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 3.116
FY 2023	- / -	- / -	0 / 2.140	1 / 0.430	0 / 0.000	1 / 0.430	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.570
FY 2024	- / -	- / -	- / -	0 / 2.695	0 / 0.000	0 / 2.695	1 / 0.481	- / -	- / -	- / -	0 / 0.000	1 / 3.176
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.017	1 / 0.398	- / -	- / -	0 / 0.000	1 / 3.415
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.501	2 / 0.879	- / -	0 / 0.000	2 / 3.380
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.755	1 / 0.510	0 / 0.000	1 / 3.265
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.196	Continuing	Continuing
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 14.074	1 / 2.893	3 / 3.353	1 / 3.125	0 / 0.000	1 / 3.125	1 / 3.498	1 / 2.899	2 / 3.634	1 / 3.706	Continuing	Continuing

Installation Schedule
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	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	-	-	-	2	1	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	1	-	-	1	-	-	1	27
Out	16	-	1	-	-	-	1	1	1	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	1	-	-	1	-	1	27

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment							<b>P-1 Line Item Number / Title:</b> 5253 / Tomahawk Support Equipment					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> 289												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	976.150	87.147	92.270	92.432	0.000	92.432	97.568	101.907	98.099	96.886	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	976.150	87.147	92.270	92.432	0.000	92.432	97.568	101.907	98.099	96.886	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>976.150</b>	<b>87.147</b>	<b>92.270</b>	<b>92.432</b>	<b>0.000</b>	<b>92.432</b>	<b>97.568</b>	<b>101.907</b>	<b>98.099</b>	<b>96.886</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	0.242	-	-	-	-	-	-	-	-	0.242
Flyaway Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Theater Mission Planning Center (TMPC) and Tactical Tomahawk Weapons Control System (TTWCS) are components of the Tomahawk Weapons System (TWS) required to plan and execute Tomahawk strikes.

The Theater Mission Planning Center (TMPC) consists of Commercial and Government Off-The-Shelf (COTS/GOTS) software and COTS hardware. TMPC is the mission planning segment of the Tomahawk Weapon System (TWS) that provides subsystems for the precision targeting, route planning, mission distribution, and strike management of Tomahawk cruise missile missions from sites located ashore and afloat. TMPC optimizes all aspects of the Tomahawk missile mission to successfully engage a target. TMPC has evolved into 4 scalable configurations deployed at 184 sites: Cruise Missile Support Activities (CMSAs) (3), Tomahawk Strike Mission Planning Cells (TSMPCs) (3), Carrier Strike Groups (CSGs) (19 Total: 12 Afloat / 7 Shore) and Firing Units (FRUs) (140 - 89 Surface / 51 Subsurface). Additionally, TMPC is installed in labs (6) and training classrooms (13) that contain various combinations of the four configurations.

Continuous TMPC software updates decrease mission planning time and increase the quality and accuracy of each mission while reducing complexity. TMPC provides mission planning at the theater and operational levels and is designed for high rate mission planning production responsive to national strategic, operational, and tactical requirements. TMPC produces and distributes missions; provides command information services; provides strike planning, execution, coordination, control and reporting, and provides Maritime Component Commanders (MCC) the capability to plan or modify conventional TWS missions. TMPC supports major joint combat operations and Overseas Contingency Operations. TMPC was previously referred to as Tomahawk Command and Control System (TC2S).

Funds provide for systems engineering, testing, Independent Verification & Validation (IV&V), security accreditation, installation, site acceptance testing, user familiarization of products, and hardware. Also, this funding line item provides for COTS refreshment, engineering changes, software upgrades, cyber-security modernization, and associated Nuclear Powered General Purpose Attack Submarine/Guided Missile Destroyer/Guided Missile Cruiser/Nuclear Aircraft Carrier (SSNs/DDGs/CGs/CVN) logistics and infrastructure to maintain compatibility and interoperability with existing and future TMPC and TTWCS system configurations.

Surface and Submarine Tactical Tomahawk Weapon Control System (TTWCS) is a post milestone III (Milestone C) program executing a technology refresh to support Tomahawk's Block V Series introduction in FY 2021. In FY 2024, TTWCS expects to meet the requirements in support of transition from a legacy ACAT III program to the Software Acquisition Pathway following a signed Acquisition Decision Memorandum and pathway designation in FY 2023. Continuous TTWCS software and hardware updates decrease mission prep time, increase situational awareness, reduce operator workload in an increasingly complex maritime environment and reduce complexity at the user interface. TTWCS v5.6X software series was released in FY 2021 and continues to be delivered throughout the following years to promulgate it across the Fleet, FRUs (140 - 89 Surface / 51 Subsurface), labs (6), and initial training classrooms (2). In addition, funds provided continue to support TTWCS viability and ensure compliance with cyber security mandates,

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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 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment		P-1 Line Item Number / Title: 5253 / Tomahawk 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: 289		
address hardware obsolescence through periodic COTS hardware refresh and periodically refresh of GOTS software to migrate away from obsolete or unsupportable software. Program options are being identified that will increase TWS capabilities integrated into future platforms (LUSV, FFG, and ground-launched applications).		



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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 04: Ordnance Support Equipment / BSA 3: Ship Missile Systems Equipment					P-1 Line Item Number / Title: 5253 / Tomahawk 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: 289										
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 / 525300, TOMAHAWK Support Equipment				- / 976.150	- / 87.147	- / 92.270	- / 92.432	- / 0.000	- / 92.432
P-40	Total Gross/Weapon System Cost				- / 976.150	- / 87.147	- / 92.270	- / 92.432	- / 0.000	- / 92.432
*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:**

This line funds TMPC and TTWCS system modernization upgrades.

FY 2024 Tomahawk Weapons System funds provide for integration, modernization and interoperability efforts necessary to keep pace with changes and threats, retain capability and exploit capabilities of internal products (TWS All-Up-Round missile and TTWCS) and external products (Modernized Integrated Data Base (MIDB), National Geospatial Intelligence Agency (NGA) products, Distributed Common Ground Systems (DCGS) Integrated Backbone (DIB) compliance, Future Imagery Architecture (FIA) imagery formats and Intelligence Surveillance & Reconnaissance (ISR) interfaces, Network Centric Enterprise Services (NCES), and Global Information Grid). These efforts ensure the continued effectiveness and relevance of the Tomahawk Weapons System.

TMPC: FY 2024 funding is required to continue the upgrade of unsupportable and obsolete TMPC hardware and software, ensure compliance with DoD cyber-security mandates, continue fielding of TMPC 6.0 onboard CVNs, Command Ships, Firing Units (DDGs/CGs), and shore activities. FY 2024 also funds modernization upgrades necessary to improve cybersecurity posture across all TMPC sites to a minimum required level of robustness, resiliency, and cyber survivability in light of the constantly evolving technology and threat space to preserve national first-strike Tomahawk system of systems capability. These upgrades are required for fielding TMPC 7.0 and support the employment and capability of the Maritime Strike Tomahawk ACAT I subprogram. These upgrades enable fielding of advanced capabilities of the Tomahawk Modernization program with required program protection safeguards to protect Critical Program Information. The increase in funding from FY 2023 to FY 2024 provides initial hardware for TMPC 7.0 installations at Cruise Missile Support Activities (CMSALANT and CMSAPAC) and Tomahawk Strike Mission Planning Cells (C5F and C6F).

TTWCS: FY 2024 funding is required to continue addressing specific security and supportability builds for v5.6X series software, the deployment of v5.6X series software and procurement/assembly/deployment of (V)6 hardware supporting Block V series missile capabilities, and the commencement of v7.X series system engineering activities. FY 2024 funding supports the continued fielding of updated hardware and v5.6X series software and its derivative/s to Firing Units and shore sites, and for integrated logistics support required for the end-items. Other FY 2024 activities include HW procurement, HW build-up for partial software virtualization, installation advance planning, and long term planning for future software versions, and technical data package. TTWCS relies on COTS hardware and software tools that require a stable and established upgrade path to meet cyber security mandates, address supply chain risk management, ensure continued vendor supportability, quality assurance / lot specifications, and ensure interoperability between tightly coupled COTS software applications, operating systems, and hardware processing nodes. Product improvement resources are required to comply with commercial hardware and software supportability mandates, obsolescence, and information assurance requirements to maintain pace with modern computing architectures and evolving cyber threats.

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Exhibit P-5, Cost Analysis: PB 2024 Navy												Date: March 2023						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3						P-1 Line Item Number / Title: 5253 / Tomahawk Support Equipment						Item Number / Title [DODIC]: 1 / 525300, TOMAHAWK Support 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				
Procurement Quantity <i>(Units in Each)</i>				-		-		-		-		-		-				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				976.150		87.147		92.270		92.432		0.000		92.432				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				976.150		87.147		92.270		92.432		0.000		92.432				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				976.150		87.147		92.270		92.432		0.000		92.432				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares <i>(\$ in Millions)</i>				-		-		0.242		-		-		-				
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>				-		-		-		-		-		-				
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 - TTWCS Cost																		
Recurring Cost																		
1.1.1) Tactical Tomahawk Weapon Control System (TTWCS) Hardware <sup>(1)</sup>	-	-	32.275	-	-	4.800	-	-	4.884	-	-	4.735	-	-	-	-	-	4.735
Subtotal: Recurring Cost	-	-	32.275	-	-	4.800	-	-	4.884	-	-	4.735	-	-	-	-	-	4.735
Subtotal: Hardware - TTWCS Cost	-	-	32.275	-	-	4.800	-	-	4.884	-	-	4.735	-	-	-	-	-	4.735
Hardware - HARDWARE RECURRING SUPPORT - TTWCS Cost																		
Recurring Cost																		
2.1.1) TTWCS Product Improvement <sup>(2)</sup>	-	-	218.060	-	-	17.826	-	-	18.182	-	-	17.041	-	-	-	-	-	17.041
Subtotal: Recurring Cost	-	-	218.060	-	-	17.826	-	-	18.182	-	-	17.041	-	-	-	-	-	17.041
Subtotal: Hardware - HARDWARE RECURRING SUPPORT - TTWCS Cost	-	-	218.060	-	-	17.826	-	-	18.182	-	-	17.041	-	-	-	-	-	17.041
Hardware - TMPC Cost																		
Recurring Cost																		
3.1.1) Tomahawk Mission Planning Center (TMPC) Hardware <sup>(3)</sup>	-	-	34.575	-	-	3.034	-	-	3.285	-	-	4.121	-	-	-	-	-	4.121
Subtotal: Recurring Cost	-	-	34.575	-	-	3.034	-	-	3.285	-	-	4.121	-	-	-	-	-	4.121

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Exhibit P-5, Cost Analysis: PB 2024 Navy												Date: March 2023						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 3						P-1 Line Item Number / Title: 5253 / Tomahawk Support Equipment						Item Number / Title [DODIC]: 1 / 525300, TOMAHAWK Support Equipment						
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 - TMPC Cost	-	-	34.575	-	-	3.034	-	-	3.285	-	-	4.121	-	-	-	-	-	4.121
Software - PRODUCT IMPROVEMENTS - TMPC Cost																		
Recurring Cost																		
4.1.1) TMPC Product Improvements <sup>(4)</sup>	-	-	230.553	-	-	27.137	-	-	26.870	-	-	26.340	-	-	-	-	-	26.340
Subtotal: Recurring Cost	-	-	230.553	-	-	27.137	-	-	26.870	-	-	26.340	-	-	-	-	-	26.340
Subtotal: Software - PRODUCT IMPROVEMENTS - TMPC Cost	-	-	230.553	-	-	27.137	-	-	26.870	-	-	26.340	-	-	-	-	-	26.340
Support - Support - TTWCS Cost																		
5.1) TTWCS Production Engineering <sup>(5)</sup>	-	-	28.212	-	-	1.121	-	-	1.576	-	-	1.604	-	-	-	-	-	1.604
5.2) TTWCS Integrated Logistic Support <sup>(6)</sup>	-	-	155.092	-	-	10.692	-	-	11.423	-	-	11.938	-	-	-	-	-	11.938
Subtotal: Support - Support - TTWCS Cost	-	-	183.304	-	-	11.813	-	-	12.999	-	-	13.542	-	-	-	-	-	13.542
Support - TMPC Cost																		
6.1) TMPC Production Engineering <sup>(7)</sup>	-	-	56.552	-	-	4.555	-	-	5.169	-	-	5.323	-	-	-	-	-	5.323
6.2) TMPC Production Support <sup>(8)</sup>	-	-	52.839	-	-	4.285	-	-	4.904	-	-	5.043	-	-	-	-	-	5.043
6.3) TMPC Integrated Logistic Support <sup>(9)</sup>	-	-	143.964	-	-	13.697	-	-	15.977	-	-	16.287	-	-	-	-	-	16.287
Subtotal: Support - TMPC Cost	-	-	253.355	-	-	22.537	-	-	26.050	-	-	26.653	-	-	-	-	-	26.653
Support - ILS INSTALLATIONS Cost																		
7.1) FMP Installations	-	-	15.139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - ILS INSTALLATIONS Cost	-	-	15.139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Miscellaneous Cost																		
8.1) TTWCS Other Cost	-	-	8.889	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Miscellaneous Cost	-	-	8.889	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	976.150	-	-	87.147	-	-	92.270	-	-	92.432	-	-	0.000	-	-	92.432

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<b>Exhibit P-5, Cost Analysis: PB 2024 Navy</b>		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 3	<b>P-1 Line Item Number / Title:</b> 5253 / Tomahawk Support Equipment	<b>Item Number / Title [DODIC]:</b> 1 / 525300, TOMAHAWK Support Equipment
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
<b>Footnotes:</b> <p>(1) TTWCS Hardware: FY 2024 funds are required to address hardware obsolescence through periodic COTS hardware refresh and continuously assess supply chain risk and alternative hardware sourcing. Continued funding is required across the FYDP to support planned procurement of TTWCS suites for retrofit of periodic updates onto Fleet surface platforms. Funding increases over the rate of inflation are due to system performance enhancements necessary to fulfill Maritime Strike Tomahawk engagement planning requirements.</p> <p>(2) TTWCS Product Improvement: FY 2024 funding supports initiating TTWCS v7.X design, development and integration efforts necessary to support the on-time Fleet Release of JMEWS (Joint Multiple Effects Warhead System) capability in FY 2027. TTWCS relies on COTS hardware, operating systems, and software that require a stable and established upgrade path to meet cyber security mandates, ensure continued vendor supportability, conduct supply chain risk management assessments, avoid costly emergent retrofits of fielded systems, and ensure interoperability between tightly coupled COTS applications and hardware processing nodes.</p> <p>(3) TMPC Hardware: FY 2024 funding increased due to the procurement of software and hardware to implement stronger cross-domain cybersecurity mandates and hardware for Windows 11 implementation. It also continues the procurement of hardware for TMPC 7.0 modernization upgrades and installations at Cruise Missile Support Activities (CMSALANT and CMSAPAC), Tomahawk Strike Mission Planning Cells (C5F and C6F), CVNs, and Firing Units. TMPC 6.0 and 7.0 are mission critical to support upgraded navigation, communications capabilities, and systems essential to the continued effectiveness and interoperability of the TWS.</p> <p>(4) TMPC Product Improvement: FY 2024 provides ongoing software engineering efforts associated with the delivery of system modernization and improvements by the prime developers to continue the upgrade of unsupported and obsolete TMPC hardware and software and to ensure compliance with DoD cyber security mandates. Funding supports modernization upgrades necessary to improve cybersecurity posture across all TMPC sites to a minimum required level of robustness, resiliency, and cyber survivability in light of the constantly evolving technology and threat space to preserve national first-strike Tomahawk system of systems capability. These upgrades are required for fielding TMPC 7.0 and support the employment and capability of the Maritime Strike Tomahawk ACAT I subprogram and enables the fielding of advanced capabilities of Tomahawk Modernization program with required program protection safeguards to protect Critical Program Information. Funding provides for completion of the Maritime Strike Tomahawk (MST) Product Acceptance Test (PAT) to support software modernization of infrastructure changes for TMPC 7.0 to support the Maritime Strike Tomahawk Missile in its operational environment. Funding provides software system upgrades for the submarine community to address system interfaces and upgrades to support the TMPC system usability improvements required for fleet operators to execute large and complex TLAM operations as required by US Fleet Forces Command (USFFC) and link existing targeting sources to the Maritime Strike Tomahawk Missile.</p> <p>(5) TTWCS Production Engineering Support: FY 2024 funding is required for kit production in support of Surface/Submarine installations onboard firing units. The increased funding levels in FY 2024 are required for documentation supporting hardware qualification, reports of testing/integration of ship sets, hardware build-up and tech data packages, installation drawings, advance planning efforts, cybersecurity hardening, and system recovery to ensure the continued effectiveness and interoperability of the TWS in the face of a sophisticated cyberattack, additional engineering support required for supply chain risk management, quality assurance testing of component lots, interoperability between tightly coupled COTS applications and hardware processors, and continued vendor supportability scans.</p> <p>(6) TTWCS Integrated Logistics Support: FY 2024 funding required for Surface/Submarine installations onboard firing units. Variations in ship availability schedules are the cause of funding changes from year to year.</p> <p>(7) TMPC Production Engineering: Provides systems engineering support for system design and definition of requirements necessary to evaluate all functional aspects of the TMPC subsystems and workflows that directly impact strike &amp; execution and mission planning products. It includes reviewing TWS and external interfaces for impacts resulting from design upgrades/changes within TWS and by external organizations, Independent Verification &amp; Validation (IV&amp;V), and security accreditation activities.</p> <p>(8) TMPC Production Support: Funds activities that directly support system upgrades requirements such as user events, requirements validation, systems engineering technical reviews, software formal qualification testing, and delta training documentation.</p> <p>(9) TMPC Integrated Logistics Support: FY 2024 funds provide for employment and capability of the Maritime Strike Tomahawk an ACAT-1 subprogram, and continues the fielding of advanced capabilities of Tomahawk Modernization program with required program protection safeguards to protect Critical Program Information. This line continues TMPC 6.0 Firing Units Guided Missile Destroyer, Guided Missile Cruiser, and Nuclear Attack Submarine DDGs/CGs/SSNs). TMPC 7.0 supports key mission planning timeline improvements, cybersecurity hardening, and system recovery to ensure the continued effectiveness and interoperability of the TWS in the face of a sophisticated cyberattack. FY 2024 also provides funding to continue TMPC 7.0 installations at the Cruise Missile Support Activities &amp; Tomahawk Strike Mission Planning Cells (TSMPCs) (3 - C5F, C6F, and C7F), Carrier Strike Group suites both afloat on CVNs and key control nodes ashore as well as training and labs.</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 4: FBM Support Equipment							<b>P-1 Line Item Number / Title:</b> 5358 / Strategic Missile Systems Equip					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> 0603561N, 0603595N, 0603570N, 0901211N, 0805376N, 0101228N				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,833.236	276.430	279.430	325.318	0.000	325.318	321.406	435.968	325.448	447.515	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,833.236	276.430	279.430	325.318	0.000	325.318	321.406	435.968	325.448	447.515	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1,833.236</b>	<b>276.430</b>	<b>279.430</b>	<b>325.318</b>	<b>0.000</b>	<b>325.318</b>	<b>321.406</b>	<b>435.968</b>	<b>325.448</b>	<b>447.515</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Thousands</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Thousands</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Description:</b>												
<p>This budget provides for the procurement of Strategic Weapons System (SWS) equipment for deployed ballistic missile submarines (SSBNs) and shore support sites to support the TRIDENT II (D5) program. Included are shipboard subsystem equipment modernization and technical refresh efforts associated with the TRIDENT II (D5) life extension program. TRIDENT II SSBN hull life has been extended, therefore extending system life to FY 2042.</p>												
<b>OTHER MATERIAL SUPPORT</b>												
<p>A broad range of other material support equipment must be procured for deployed SSBNs, shore installations and contractor facilities. Included within this category are general and special purpose test equipment, launcher expendables, navigation principal items, test instrumentation in support of missile flight tests, and missile checkout equipment.</p>												
<p>The Naval Industrial Reserve Ordnance Plant (NIROP) Capital Maintenance budget provides for major rehabilitation and repair work for major facility and infrastructure and systems for the Navy owned Pittsfield, MA facilities supporting the SWS. The NIROP infrastructure and systems are housed primarily in three main buildings and include but are not limited to power, steam, and cooling systems &amp; infrastructure, life-safety and security systems, and other critical infrastructure such as roofs, elevators, restrooms, and parking lots. Work is performed on each major system on a rolling maintenance program that is based on service life. Continued maintenance of these critical facility systems is essential for support of the on-going Fleet Ballistic Missile (FBM) programs at the Pittsfield, MA NIROP.</p>												
<b>ALTERATIONS</b>												
<p>Alterations to non-flying tactical hardware are continuing requirements for the SWS. Requirements primarily relate to shipboard investments in Commercial-off-the-Shelf/Non-Developmental Items (COTS/NDI) SWS subsystem equipment, including periodic refresh cycles, to ensure continued reliable performance of the weapon system for its extended service life to match the OHIO Class life extension. Strategic Programs Alterations (SPALTs) also entail</p> <p>the application of available technology to eliminate personnel safety hazards, correct design deficiencies, maintain system effectiveness by resolving equipment operability problems, achieve logistic economies, and provide for shipboard subsystem D5 life extension modernization efforts.</p>												
<p>Funds are required to procure alterations to the SWS launcher and fire control subsystems; to procure inertial, non-inertial, and Electrostatic Gyro Navigator (ESGN) navigation subsystem equipment on deployed SSBNs and installed at supporting shore facilities, including the TRIDENT Training Facility (TTF), Bangor; TTF, Kings Bay; the Ashore Navigation Center; and the Inertial System Test Laboratory; to test instrumentation used on SSBNs, support ships, and at the Eastern Test Range, the TRIDENT Refit Facility (TRF), Bangor, and TRF, Kings Bay; and to missile handling equipment, missile test and readiness</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 4: FBM Support Equipment		<b>P-1 Line Item Number / Title:</b> 5358 / Strategic Missile Systems Equip
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0603561N, 0603595N, 0603570N, 0901211N, 0805376N, 0101228N
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>equipment, and surface support equipment. Installation of approved SPALTs is performed on a turnkey basis in conjunction with the procurement of equipment. Use of COTS/NDI has been initiated and is being implemented in all subsystems, wherever possible.</p> <p>The majority of the Alterations funding supports the Shipboard System Integration (SSI) program which utilizes a COTS based strategy that integrates common electronics (from Fire Control, Launcher, and Navigation) into the fire control sub-system as well as refreshing inertial systems in order to ensure the TRIDENT II (D5) weapon system can be sustained to FY 2042 in support of OHIO Class SSBNs. Below is a description of each current SSI Increment (Inc):</p> <p>SSI Inc 8: Inc 8 provides replacement of the 30 year old ESGN which needs a refresh of inertial technology components, provides replacement of the Electronic Equipment Consoles (EEC), and updates Navigation Subsystem software to accommodate ESGN replacement navigator. Also, provides SWS subsystem SPALTs for FC and TTF NAV Lab trainers, and SDS/DRS Software SPALT changes which are driven by data requirement changes. The SHIPALTs retain NAV Center bedplate, cabling, chilled water/ventilation, and retain electrical power.</p> <p>SSI Inc 11: Inc 11 develops the Launcher Initiation System (LIS) for backfit onto OHIO Class D5LE. This provides a technical refresh of 30+ year old technology to ensure long term system reliability. Ship/SWSS SHIPALT is to replace electrical cable with hybrid fiber-optic/electrical cable.</p> <p>SSI Inc 13: Inc 13 provides Shipboard Systems Refresh for FCS, NAV, and Missile Test and Readiness Equipment (MTRE) to integrate with the subsystems.</p> <p>SSI Inc 15: Prerequisite is SSI Inc 13. Inc 15 provides pre-configuration and post-configuration support of Inc 8 and Inc 11. Inc 15 provides refresh alterations for the fire control subsystem.</p> <p>SHIPBOARD SYSTEMS MODERNIZATION PORTFOLIO (SSMP) Program In FY 2022 efforts began on the Strategic Weapon System (SWS) Modernization Program as a follow on to the SSI program. SSP is undertaking a strategic modernization of the shipboard architecture to harness new technologies and leverage modern engineering methodologies. This will ensure credible, reliable and adaptable capabilities are provided to the warfighter and nation at the speed of relevance. SSMP is the overarching program management framework for the integration of all acquisition activity related to the shipboard systems of the Strategic Weapon System (SWS). It includes re-architecture work to achieve an optimized shipboard architecture across SWS subsystems as well as the integration of all other shipboard systems development and sustainment activities. This ensures that all investment decisions pertaining to shipboard systems are made with the entirety of the shipboard systems needs in mind.</p> <p>SSMP is defined in three major programmatic elements:</p> <p>A. The SSP Shipboard Integration (SSI) Increment Program, as discussed above. B. Shipboard Architecture Modernization Initiative (SAMI) C. Continuous Capability Insertion and Sustainment (C2IS)</p> <p>A. The SSI Increment program consisted of multiple incremental alterations to the shipboard systems of the SWS that primarily addressed obsolescence and sustainment. The SSI Increments program employed a strategy of targeted technology refreshes and functional consolidations in conjunction with life of type buys to manage obsolescence within the shipboard systems. While the increments were successful in achieving limited modernization of portions of the system design they did not principally address a holistic modernization of the underlying architecture of the collection of shipboard systems (Fire Control, Navigation, Shipboard Data System, and Launcher) that was established with D5 in the 1980s. The SSI Increments program began with SSI Increment 1 which started in the early 2000s and will conclude with the deployment of Increment 15 in the late 2020s.</p> <p>B. The Shipboard Architecture Modernization Initiative (SAMI) builds on the Increment 15 system baseline and is designed to achieve an architectural re-design of the shipboard systems that leverages modern technologies and approaches that will eliminate architectural constraints that hinder adaptability in the current SWS. Whereas the SSI Increment program focused on minimizing lifecycle costs around a stable system capability and performance baseline, SAMI focuses on maximizing scalability and adaptability in the architecture to enable rapid response to a dynamically changing threat environment while still working</p>		

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<p>to minimize lifecycle costs. This shift in approach is needed to counter the rapidly changing threat environment that results from two near-peer nuclear adversaries and resultant dynamic needs for SLBM capability.</p> <p>SAMI is structured around three lines of modernization which will establish a shipboard common infrastructure. Once the shipboard common infrastructure is in place, legacy software can be refactored to make use of standard functions and features and new capabilities can be more easily and rapidly introduced. The three lines of modernization are:</p> <ol style="list-style-type: none"> <li>1. Implementation of a modern General Purpose Computing (GPC) infrastructure. This is critical to provide a scalable computational element that leverages modern technologies to achieve critical improvements in computational capability and cyber resiliency.</li> <li>2. Implementation of a modern Deterministic Computing Element (DCE) infrastructure. This is critical to provide a modernized real-time embedded computing infrastructure based on the latest technologies and industry standards for high availability, high criticality systems.</li> <li>3. Implementation of a modern data architecture and shipboard-flight interface infrastructure. This is critical to modernize communication protocols, software design, data structures, and interfaces to improve cyber security, supportability, and maintainability of the system. It is also an essential enabler to support emerging technologies under development for the flight and re-entry systems (e.g. D5LE2 and Mk7/W93).</li> </ol> <p>Unlike the SSI Increment program, SAMI will be executed using an agile methodology and digital engineering methods. Smaller alterations to the existing shipboard systems will be executed over time rather than establishing several large incremental procurements. This approach is important for two reasons. First it will allow SSP to respond rapidly to changing National priorities while still making strategic investments in the re-architecture. Second, by overlapping and sequencing the roll off from SSI Increments 8 and 15 with the ramp up of SAMI effort, SSP is able to leverage the established industrial base which is a significant factor in managing risk, ensuring expertise and unique knowledge pertaining to the SWS design is retained and applied to the re-architecture efforts.</p> <p>SAMI is strategically phased to also support the critical D5LE2 experimental test flight program in the early 2030s and planned COLUMBIA class refreshes.</p> <p>C. The Continuous Capability Insertion &amp; Sustainment (C2IS) element of the SSMP defines the approach to both sustaining the shipboard elements of the SWS and ensuring adaptability and timely insertion of capabilities to meet the dynamic threat environment and needs of the Nation. C2IS is fully integrated with SAMI efforts to enable an appropriate balance of acquisition decisions between re-architecture, obsolescence management, and capability insertions. As SAMI is incrementally realized, the new architecture will enable a faster cadence that is more adaptable and affordable to changes. This will allow SSP to rapidly address both obsolescence and capability insertion, including improvements in SWS performance and the integration of support for advanced missile/re-entry technologies.</p> <p>Continuous Sustainment: This aspect addresses the need to continuously sustain the shipboard systems. This includes planning for technology refreshes and obsolescence management during all phases of SSMP, leveraging the modernized architecture established by the SAMI. Specifically, the decoupling of hardware and software and introduction of virtualization technologies in the SAMI will serve to enable rapid insertion of technology refreshes and simplify obsolescence management of the shipboard systems. The objective is for the program to be capable of hardware insertion every two years and annualized software releases.</p> <p>Capability Insertion: This aspect addresses the need to provide capability to the Warfighter. Before, during, and after the SAMI efforts are complete Shipboard Subsystems must be able to adapt and introduce capability to keep pace with the changing threat environments. To achieve this goal, a balance will need to be maintained between shipboard architectural changes and capability insertion. Once the Shipboard Common Infrastructure is in place the ability to rapidly insert capability will be improved and is essential for the SWS to adapt and respond to the ever-changing threats of the future.</p> <p><b>TRAINING</b> This category provides for procurement of, and alterations to, both tactical and non-tactical equipment required at submarine training facilities to train personnel in the operation and maintenance of launcher and handling, fire control, navigation, missile checkout, and test instrumentation subsystems. Each training facility consists of an integrated family of system and unit laboratories that interface with a training</p>		

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<p>simulation system to provide complete and realistic training for replacement and off-crew personnel, both officer and enlisted, as required for manning of SSBNs and shore facilities. Funding is budgeted to procure training-unique equipment required as the result of alterations to SWS tactical equipment, including those associated with D5 life extension.</p> <p>COLUMBIA CLASS</p> <p>Funding in this category is in support of the COLUMBIA Class SSBN for the procurement of trainer equipment and execution of Trident Planned Equipment Replacement Program (TRIPER) efforts. Funding is required to develop, procure, install and test the Strategic Weapon Support Systems (SWSS) trainer equipment suite within the COLUMBIA Class Kings Bay (KB) TRIDENT Training Facility (TTF) 2-tube configuration. The SWSS trainer equipment suite simulates the tactical configuration required to conduct COLUMBIA crew training and certification beginning in January 2026. Procurement of select SWSS components, such as training missile tubes and associated on and off-tube components, as well as engineering labor required to integrate the COLUMBIA design into the trainer configuration, commenced in FY 2022 to ensure initial equipment is installed before exterior building construction is complete (FY 2024) and all remaining hardware can be delivered in FY 2024 for installation, checkout and testing. Similar procurements for the COLUMBIA Class Bangor TTF commence in FY 2028. Per OSD(A&amp;S) and SECNAV direction, COLUMBIA Program costs reflect requirements per NAVSEA 05C's 2021 program cost estimate. In support of the August 2020 Lead Ship Authorization In-Process Review, funding was increased primarily driven by properly priced TRIPER spares and corrected re-phasing of training requirements added to the program. The 2021 program cost estimate further refined this to ensure funding profile phasing was as needed.</p>		



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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 4: FBM Support Equipment						<b>P-1 Line Item Number / Title:</b> 5358 / Strategic Missile Systems Equip				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0603561N, 0603595N, 0603570N, 0901211N, 0805376N, 0101228N				
<b>Line Item MDAP/MAIS Code:</b> N/A										
<b>Exhibits Schedule</b>					<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Exhibit Type</b>	<b>Title*</b>	<b>Subexhibits</b>	<b>ID CD</b>	<b>MDAP/MAIS Code</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>
P-40a	Strategic Missile Systems Equip	P-5a, P-21			- / 1,833.236	- / 276.430	- / 279.430	- / 325.318	- / -	- / 325.318
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 1,833.236</b>	<b>- / 276.430</b>	<b>- / 279.430</b>	<b>- / 325.318</b>	<b>- / 0.000</b>	<b>- / 325.318</b>
*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.										
<p><b>Justification:</b> OTHER MATERIAL SUPPORT A broad range of other material support equipment must be procured for deployed SSBNs, shore installations and contractor facilities. Included within this category are general and special purpose test equipment, launcher expendables, navigation principal items, test instrumentation in support of missile flight tests, and missile checkout equipment. Amounts included within this P1 line for this category are subdivided as follows:</p> <p>Launcher and Handling Equipment: Cost Codes 1.2 and 1.3 provide for Gas Generator (GG) Production and GG Case Hardware. GGs are utilized to eject Trident II (D5) missiles from the missile tubes during a launch.</p> <p>FY 2022 began a new acquisition strategy of producing GG and GG case hardware in alternating years. Through this strategy, 20 gas generators are procured every other year (vice 10 per year) which reduces lot testing costs associated with GGs while still allowing for continuous production due to the lead time of production. In the alternating years, gas generator case hardware is procured, in the quantity necessary to replace cases for expended/fired GGs. These quantities vary based on testing events.</p> <p>Cost Code 1.2 - GG Production funding in FY 2024 decreases as no GG are procured, a decrease from 20 in FY 2023 in accordance with the revised acquisition strategy of alternate year procurements.</p> <p>Cost Code 1.3 funding provides the procurement and qualification of GG Case Hardware required to replace cases for expended/fired GGs. Funding in this category fluctuates year to year due to test schedules. Funding increases from FY 2023 to FY 2024 are to provide 18 refurbish cases from surface launch test facility test launches.</p> <p>Cost Code 1.6 Ballast Installs - FY 2022 provided for the final installations of ballasts procured in prior years.</p> <p>Fire Control Equipment: Cost Code 2.1 funding in FY 2024 provides for procurement of continued capital maintenance projects at the Naval Industrial Reserve Ordnance Plant (NIROP) in Pittsfield, MA. The Navy NIROP facility in Massachusetts is a large multi dwelling facility, encompassing almost 900,000 sq. ft. There are three main ordnance plant (OP) buildings on the NIROP facility, OPs 1, 2, and 3. The OPs were built in the 1940s and 1950s, and the last major renovations were in the 1970s.</p> <p>Capital maintenance projects at the NIROP are essential to correct environmental, safety, and energy conservation deficiencies. Funding fluctuates annually based on specific maintenance projects necessary to correct environmental, safety, and energy conservation deficiencies. Increase from FY 2023 to FY 2024 is largely attributed to the Chiller Replacement for Ordinance Plant 1/2 for \$6M. Other major projects in FY 2024 include design/engineering &amp; install of the OP2 roof replacement (\$4.4M), design/engineering &amp; phase 1 underground security refresh/enhancements (\$1.6M). Various additional projects to include design/engineering &amp; restroom upgrade design/engineering &amp; office infrastructure refresh, security refresh/enhancements, UPS battery replacement load centers 1-3 &amp; 1-4, load center &amp; generator study, chiller water piping and emergent repairs.</p>										

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<p>Cost Code 2.2 provides for Auxiliary Systems Technology Refresh (ASTR) #3. The Auxiliary Systems Refresh is required to keep shipboard auxiliary systems operational and able to support the tactical development and training mission. Components are being refreshed primarily due to COTS obsolescence. Systems refreshed in ASTR #3 are vital to the shipboard Fire Control system.</p> <p>Cost Code 2.3 provides for Targeting Hardware which consists of computer and network hardware replacement for life cycle support components including Distributed Graphics Systems, Targeting Analysis and Application Platforms, as well as Zone D enclave and tactical equipment.</p> <p>Cost Code 2.4 provides a refresh of the existing SSP Advanced Inventory and Logistics (SAIL) system to include software and hardware procurements necessary for the system to meet Information Assurance (IA) compliance requirements. SAIL is SSP's inventory tracking system.</p> <p>Cost Code 2.5 provides refresh of Targeting Software which supports all Submarine Launched Ballistic Missile (SLBM) Targeting and USSTRATCOM support functions. These functions involve development and testing of mission planning software for integration into strategic planning software at USSTRATCOM, training and analysis software used at SSBN Task Forces 134/144, targeting software used in shipboard fire control software. This targeting software is used onboard a SSBN and sent to USSTRATCOM mission planning which develops Strategic war plan. Increase from FY 2023 to FY 2024 is due to full deployment of X56 Fire Control software.</p> <p>Cost Code 2.6 funding provides procurement of hardware and software for the Shipboard Planning Operational Flexibility (SPOF) program, formerly referred to as the RT-WEG program, consisting of updates to the fire control system requested by USSTRATCOM to create a Submarine Launched Ballistic Missile (SLBM) flexibility and efficiency enhancement program. Additional information on this program can be provided at a higher classification level. Decrease from FY 2023 to FY 2024 due to the completion of SPALT kit procurement in FY 2023.</p> <p>Navigation Equipment: Cost Code 3.4 provides ESGN Stable Platform &amp; Housing Material (SPH) &amp; Shock Isolation System Refresh. Increase from FY 2023 to FY 2024 is due to procurement of Inertial Navigation System SPH refurbishment kits. In FY 2024, 4 INS refurbishment hardware kits and 1 kit of long lead material are procured. Kits contain gimbal assembly motors, angle readout assemblies, slip rings, water distribution assemblies, coolant case covers, fans, heat exchanger assemblies, thermal management assemblies, shock isolation refurbishment bearings and general refurbishment materials</p> <p>Instrumentation/Missile Test Equipment: Funding in all years provides for shore based and shipboard test instrumentation equipment in support of missile flight tests.</p> <p>Code code 4.1 funds provisioning spares for shipboard spare end items, to include items umbilical cable shipsets, as well as missile test and readiness equipment, equipment section body bridge support equipment, inspection gages, and personal access mats.</p> <p>Cost Code 4.5 funds Flight Test Instrumentation equipment. Scope varies annually based on specific FTI systems being refreshed. FY 2024 refresh costs decrease due to a reduction in the number of systems being refreshed compared to FY 2023. In FY 2024, funding provides a refresh of launch area communication and position systems that are temporarily installed on the SSBN to support flight tests. The positioning system determines the location of the submarine via acoustic transponders and supplies this position to range safety systems in order to instantly acquire a Trident missile upon launch. The communication system allows for message transmission between the SSBN and our Launch Area Support Ship (LASS) via acoustic transducers and sonobuoys. This communication is essential for determining both SSBN and range readiness.</p> <p>Information Technology (IT): Cost Code 5.1 funding in all years provides for IT equipment acquisitions (hardware and related software) in support of SSP. This includes the IT hardware and software components connected to the Strategic Weapons System Network (SWSNET). FY 2024 increases to begin refresh of IT hardware at SSP sites in Titusville, FL and Denver, CO.</p>		
ALTERATIONS		

# UNCLASSIFIED

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<p>Alterations to non-flying tactical hardware are continuing requirements for the SWS. Requirements relate primarily to shipboard investments in (COTS/NDI) SWS subsystem equipment, including periodic refresh cycles, to ensure continued reliable performance of the weapon system for its extended service life to match the OHIO Class life extension. SPALTs also entail the application of available technology to eliminate personnel safety hazards, correct design deficiencies, maintain system effectiveness by resolving equipment operability problems, achieve logistic economies, and provide for shipboard subsystem D5 life extension modernization efforts.</p> <p>Funds are required to procure alterations to the SWS launcher and fire control subsystems; to inertial, non-inertial, and ESGN navigation subsystem equipment on deployed SSBNs and installed at supporting shore facilities, and to missile handling equipment, missile test and readiness equipment, and surface support equipment. Installation of approved SPALTs is performed on a turnkey basis in conjunction with the procurement of equipment. Use of COTS/NDI has been initiated and is being implemented in all subsystems, wherever possible.</p> <p>Launcher and Handling Equipment: Cost Code 6.4 increases from FY 2023 to FY 2024 to fund the Mobile Test Bed Refresh Production and Accomplishment, Missile Away Simulator PAD Development, FUITs PAD Development, FUFT PAD Development, LSU Test Fixture Development, Test Set Commonality Development, and Cooling Chamber Shipping Safety Cover development. These SPALTs are necessary to address aging and obsolescence issues.</p> <p>Fire Control Equipment: Cost Code 7.2 Minor SPALTs funds non SSI related Fire Control development efforts in support of Strategic Weapon System and Fire Control capability insertions and sustainment. These efforts include FC enhancements and corrections for non-SSI FC changes including the associated auxiliary systems and training systems changes, as well as associated System Engineering Integration Team (SEIT) efforts and software development.</p> <p>Navigation Equipment: Cost Code 8.2 provides for Legacy ESGN SPALTs. Effort increases in FY 2024 to fund hardware retrofits necessary during initial deployment of Increment 8. Due to the compressed deployment and accelerated production schedule, not all changes could be made to the production line prior to units being accepted by the government. This funding is necessary to allow for the implementation and procurement of these changes to ensure the maintainability improvements are integrated, and that the newly deployed navigation systems remain able to meet weapon system accuracy and availability requirements.</p> <p>Cost Code 8.3 Increase from FY 2023 to FY 2024 due to the procurement of 7 quantities of TR-143A SPALT, an increase of 2 quantities from FY 2023. Additionally FY 2024 begins two new refreshes - TDDSV4 Refresh which supports Top Secret media encryption of patrol data for SSI Inc 8 and 13 and NEDS refresh.</p> <p>Cost Code 8.4 Provides for development of the TR-E1 (TRIDENT SSI 8 Version 1) Software SPALT which updates the Tactical navigation software onboard the SSBN in order to resolve any anomalies with Increment 8 initial outfitting.</p> <p>Cost Code 8.6 Provides for development of the Broadband Navigation SONAR Navigation Sonar System (BBNS), which transitioned from a Small Business Innovation Research (SBIR) project to a production effort. This initiative will focus on the modernization and extension of the existing navigation sonar technology developed in the 1970s and will remove operational constraints within the current system and reduce sensitivity to operational environments.</p> <p>Instrumentation/Missile Checkout equipment: Cost Code 9.1 FY 2024 funding continues Forecast Instrumentation SPALTs for hardware modification to submarine instrumentation of flight systems.</p> <p>ALTERATIONS (SSI and SSMP) The majority of the Alterations funding supports the Shipboard System Integration (SSI) program which utilizes a COTS based strategy that integrates common electronics (from Fire Control, Launcher, Navigation and Shipboard Data Recording Systems) into the fire control sub-system as well as refreshing inertial systems in order to ensure the TRIDENT II (D5) weapon system can be sustained to support both the OHIO class submarines through their end of life as well as support the COLUMBIA class submarines currently in production.</p>		

# UNCLASSIFIED

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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: 0603561N, 0603595N, 0603570N, 0901211N, 0805376N, 0101228N
Line Item MDAP/MAIS Code: N/A		
<p>Below is a description of each current SSI Increment (Inc):</p> <p>SSI Inc 8: Inc 8 provides replacement of the 30 year old Electrostatic Gyro Navigator (ESGN) which needs a refresh of inertial technology components, replacement of the Electronic Equipment Consoles (EEC), and updates to Navigation Subsystem software to accommodate the ESGN replacement navigator. Also, provides SWS subsystem SPALTs for FCS and TTF NAV Lab trainers, and SDS/DRS Software SPALT changes which are driven by data requirement changes. The SHIPALTs retain NAV Center bedplate, cabling, chilled water/ventilation, and retain electrical power. The current ESGN was designed and deployed in the early 1980s with a 20 year designed service live. This refresh is critical to ensure the program continues to meet USSTRATCOM requirements, and to ensure the operational availability of the OHIO, VANGUARD, COLUMBIA and Dreadnought SSBNs.</p> <p>Inc 8 efforts in FY 2024 include:</p> <p>Cost Code 10.3 Navigation Increment 8 Engineering and Test concluded in FY 2022 as Increment 8 moved into production.</p> <p>Cost Code 10.4 funding decreases from FY 2023 to FY 2024 as trusted agent independent validation and verification (IV&amp;V) for subsystem qualification concluded in FY 2023 as the program transitions to production.</p> <p>Cost Code 10.5 funding reduces from FY 2023 to FY 2024 as production activities ramp down, gyroscope costs support ongoing production through completion of final gyroscope delivery.</p> <p>Cost Code 10.6 provides funding for the procurement of spares and On Board Replacement Parts (OBRPs) required for deploying Inc 8 SPALT. Decrease from FY 2023 to FY 2024 as OBRP procurement is completed.</p> <p>Cost Code 10.7 funding decreases from FY 2023 to FY 2024 as INS procurement is completed.</p> <p>Cost Code 10.8 funding decreases from FY 2023 to FY 2024 following completion of Inc 8 prerequisite Fire Control SPALT 30409. Funding supports required alterations to the ship to facilitate INC 8 installation. In FY 2024, this funding support 5 SSBN SHIPALTS.</p> <p>Cost Code 10.9 funding decreases from FY 2023 to FY 2024 following Inc 8 enabling SPALT completion. FY 2024 funds installation on 5 SSBNs.</p> <p>Cost Code 10.10 funds the establishment of a fault isolation capability for Gyroscopes. Currently, for a gyro failure, CONOPs requires removing and replacing all three gyroscopes onboard the SSBN. Once established, the capability to diagnose which gyroscope is faulty allows for the non-faulty gyroscopes to be placed back into stock. This increased availability allows for a decrease in new gyroscope procurement. The total gyroscope quantity produced for Increment 8 has been decreased, with the elimination of planned procurements as a result of the decision to pursue this fault isolation capability. Increase from FY 2023 to FY 2024 as establishment of Fault Isolation Capability ramps up.</p> <p>SSI Inc 11:</p> <p>Launcher Initiation System (LIS) is being developed for backfit onto OHIO Class D5LE. This provides a technical refresh of 30+ year old technology to ensure long term system reliability. This SHIPALT replaces electrical cable with hybrid fiber-optic/electrical cable.</p> <p>Inc 11 efforts in FY 2024 include:</p> <p>Cost Code 11.6 continues installation of Launcher system Increment 11 LIS Fiberoptic cables in FY 2024.</p>		

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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 04: Ordnance Support Equipment / BSA 4: FBM Support Equipment		P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 0603595N, 0603570N, 0901211N, 0805376N, 0101228N
Line Item MDAP/MAIS Code: N/A		
<p>Cost Code 11.7 continues LIS Fire Control SPALT kit installation efforts. In FY 2024 efforts include the installation and testing on 24 Missilized tubes on 1 SSBN during the SSBN's planned ERP period.</p> <p>SSI Inc 13: Inc 13 provides Shipboard Systems Refresh for FCS, NAV, and Missile Test and Readiness Equipment (MTRE) for integration with the subsystems.</p> <p>Cost Code 12.1 provides MTRE refresh to integrate with Fire Control software changes for SSI Inc 13. FY 2024 effort decreases from FY 2023 as MTRE Refresh begins Phase 2 Proofing, Proofing Authentication, and Refresh 1 FC/MTRE Integration Testing.</p> <p>Cost Code 12.9 funds the installation of Inc 13 Fire Control and Navigation updates. Decrease from FY 2023 to FY 2024 as final installations of Fire Control Inc 13 SPALT complete.</p> <p>SSI Inc 15: Inc 15 provides pre-configuration and post-configuration support of Inc 8 and Inc 11. Inc 15 is a critical path and the baseline for the deployment of the COLUMBIA Class SSBN. Inc 15 involves refreshes to several subsystems such as alterations for fire control equipment, navigation, launcher, and trainer subsystems. Due to the developmental challenges experienced for SSI Inc 8 during the engineering and test phase, SSP reduced the efforts of SSI Inc 15 to the minimally required effort to address obsolescence issues which are required for the SWS to be the initial baseline for the COLUMBIA class SSBN.</p> <p>Inc 15 efforts in FY 2024 include:</p> <p>Cost Code 13.2 funding for Fire Control SSI Inc 15 development. Decrease from FY 2023 to FY 2024 reflects ramping down of development efforts. FY 2024 efforts include completion of verification and validation, and Fire Control and Shipboard Data System Software Development Readiness Review (SWDRR).</p> <p>Cost Code 13.3 funding for hardware required for Inc 15 updates to the Fire Control system. Program decreases from FY 2023 to FY 2024 due to a decrease in quantity of tactical fire control kits procured. FY 2024 kits include 5 tactical SPALT Kits, in addition to the final Lot of On Board Replacement Parts and spares for the Fire Control Kits. FY 2024 also includes shipboard data system material kits for 5 land based sites, 5 SSBNs, and associated SDS spares.</p> <p>Cost Code 13.5 funds installation of Increment 15 Fire Control kits. Increase from FY 2023 to FY 2024 is due to initiation of Increment 15 installations to include initial installation at one land based site. Installed equipment includes MIN Network Switch, Server, Portable Network Device and Portable Computing Devices, along with the mechanical mounting components and cabling and associated software.</p> <p>SHIPBOARD SYSTEMS MODERNIZATION PORTFOLIO (SSMP) Program</p> <p>SSMP is an integrated modernization program structured and phased with SSI to leverage the established industrial base supporting all aspects of the Shipboard sub-systems. This will enable the SWS to be more agile and adaptable to the evolving threats and warfighter needs.</p> <p>Cost Code 14.1: Advanced Development and Technology Maturation (SAMI)</p> <p>In FY 2022 efforts began on the Shipboard Systems Modernization Portfolio Program, the follow on to the SSI program, to start advanced development and technology maturation necessary to re-architect the shipboard systems of the SWS. FY 2022 and FY 2023 efforts included capturing the shipboard architecture in a descriptive model, performing early technology trades, and early engineering efforts. FY 2024 efforts include refining the shipboard architectural descriptive model, performing technology trades to support common infrastructure development, evaluation of next-generation COTS technologies to replace those currently used in the SWS, and the development of core common infrastructure capabilities including General Purpose Computing, Virtualization, Secure Communications, System Timing, and Embedded Processing.</p> <p>Cost Code 14.2: Shipboard Re-Architecture Development (SAMI)</p> <p>Cost Code 14.2 includes the efforts to develop the shipboard re-architecture which will maximize adaptability of the SWS to adapt to changing threats by enabling rapid deployment of cost effective solutions. FY 2024 efforts include pulling forward design elements from previous SSI/development programs (Cost Code 2.6 and 13.2) as well as core infrastructure capabilities (Cost Code 14.1) for integration as the first baseline of the General Purpose Computing (GPC). Specifically, FY 2024 will begin developmental activities associated with virtualization infrastructure, integration of cyber-security features, porting select SWS</p>		

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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 04: Ordnance Support Equipment / BSA 4: FBM Support Equipment		P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip	
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A		Other Related Program Elements: 0603561N, 0603595N, 0603570N, 0901211N, 0805376N, 0101228N
Line Item MDAP/MAIS Code: N/A			
software to Linux-based virtual machines, establishing related software infrastructure, and developing the next generation workstation design. These development activities are the building blocks for the system re-architecture and form the foundation of the design for the GPC. The GPC and corresponding workstations are the first elements of the system that will be modified to begin implementation of the re-architecture and are planned to deploy in the mid-2020s.			
Cost Code 14.3: Obsolescence Management (C2SI) Cost Code 14.3 consists of obsolescence management activities necessary to maintain the currently deployed SWS. Specifically, this includes technology refresh of obsolete elements of the shipboard systems to ensure continued reliability and availability of the deployed SWS while maintaining compatibility with the pull through elements that are part of the COLUMBIA design. FY 2024 efforts include technology refreshes for elements of the SWS not refreshed by prior SSI increments. Specifically, FY 2024 includes effort to develop plans to resolve outstanding hardware replenishment requirements for non-inertial elements of the deployed tactical Navigation System, Fire Control System, and Shipboard Data System identified as at risk for obsolescence and includes the start of development of alterations to refresh those items.			
Cost Code 14.4: Capability Insertion (C2SI) Cost Code 14.4 consists of incremental deployment of capabilities necessary to maintain SWS effectiveness against a changing threat environment. This includes product improvements and optimizations of the SWS to meet USSTRATCOM targeting objectives and counter emerging threats. FY 2024 includes incremental capability insertions related to SPOF functions designed to provide optimizations of SWS performance to meet USSTRATCOM targeting objectives. This effort builds on the initial development of SPOF that was separately funded (IOC in 2023) by integrating SPOF into the SWS Modernization Program and continuing agile software developments to deploy additional product improvements.			
TRAINING SUPPORT EQUIPMENT: Cost Code 15.1 This category provides for procurement of, and alterations to, both tactical and non-tactical equipment required at submarine training facilities to train personnel in the operation and maintenance of launcher and handling, fire control, navigation, missile checkout, and test instrumentation subsystems. Each training facility consists of an integrated family of system and unit laboratories that interface with a training simulation system to provide complete and realistic training for replacement and off-crew personnel, both officer and enlisted, as required for manning of SSBNs and shore facilities. Funding is budgeted to procure training-unique equipment required as the result of alterations to SWS tactical equipment, including those associated with D5 life extension. FY 2024 increases from FY 2023 as efforts increase to support training for Increment 15. FY 2024 provides funds to update VIPr and SWIT simulations to match Inc 15 changes to SWS. Includes efforts to produce SPALT Proposal SPALT as well as participate in Inc 15 integrated process teams. Provides funds for WPC efforts and finalize trainer system specification requirements, develop facility drawings and SAT procedures, support RFT at TTF1. Provides funds for WPC efforts and initial trainer system specification requirements development.			
COLUMBIA CLASS: Cost Code 16.1 funding for COLUMBIA Class TRIPER spares was initiated in FY 2022. FY 2024 funds continue Kings Bay and Bangor Team Trainer procurements and TRIPER spares procurements. 2024 increases also include Industrial Plant Equipment procurement which will continue through 2043.			
Cost Code 16.2 funding is for COLUMBIA Class SSBN trainer equipment. Funding is required to develop, procure, install and test the Strategic Weapon Support Systems (SWSS) trainer equipment suite within the COLUMBIA Class Kings Bay (KB) TRIDENT Training Facility (TTF) 2-tube configuration. Procurement of select SWSS components such as the training missile tube, on-tube components and bench trainers commenced in FY 2022 and continues into FY 2023 to ensure missile tubes are installed before exterior building construction is complete (FY 2024) and all remaining hardware can be delivered in FY 2024 for installation, checkout and testing). Per OSD(A&S) and SECNAV direction, COLUMBIA Program costs reflect requirements per NAVSEA 05C's 2021 program cost estimate. FY 2024 funding supports final material procurements and commences installation, checkout and testing of select SWSS hardware. FY 2024 reflects the transition from major material procurements to the installation, system grooming, and integration testing phases.			

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4							P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip								Aggregated Items Title: Strategic Missile Systems 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 (\$ 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) Other Material Support- Launcher and Handling Equipment																				
1.1) Casting Powder Lot Buy	A		1,926.333	9	17.337	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) Gas Generator Production <sup>(1)(†)</sup>	A		323.736	106	34.316	-	-	-	179.500	20	3.590	-	-	-	-	-	-	-	-	-
1.3) Gas Generator Case Hardware <sup>(2)</sup>	A		-	-	2.995	-	-	3.081	-	-	-	-	-	4.086	-	-	-	-	-	4.086
1.4) Launch Tube Closures	A		533.218	55	29.327	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) Ballast Production <sup>(†)</sup>	A		442.475	40	17.699	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6) Ballast Installation	A		-	-	1.992	-	-	0.260	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) Other Material Support-Launcher and Handling Equipment			-	-	103.666	-	-	3.341	-	-	3.590	-	-	4.086	-	-	-	-	-	4.086
2) Other Material Support-Fire Control Equipment																				
2.1) Nirop Capital Maintenance <sup>(3)</sup>	A		-	-	49.065	-	-	9.464	-	-	9.987	-	-	12.047	-	-	-	-	-	12.047
2.2) Fire Control Auxillary Support Equipment	A		-	-	22.335	-	-	8.460	-	-	8.485	-	-	8.646	-	-	-	-	-	8.646
2.3) D5 Targeting Hardware	A		-	-	6.136	-	-	0.946	-	-	0.964	-	-	0.983	-	-	-	-	-	0.983
2.4) Advanced Inventory Logistics (SAIL)	A		-	-	10.552	-	-	3.092	-	-	3.153	-	-	3.216	-	-	-	-	-	3.216
2.5) Targeting Software Refresh <sup>(4)</sup>	A		-	-	69.486	-	-	11.849	-	-	12.324	-	-	13.479	-	-	-	-	-	13.479
2.6) SPOF (formerly RT - WEG) <sup>(5)</sup>	A		-	-	23.941	-	-	19.133	-	-	9.213	-	-	-	-	-	-	-	-	-
Subtotal: 2) Other Material Support-Fire Control Equipment			-	-	181.515	-	-	52.944	-	-	44.126	-	-	38.371	-	-	-	-	-	38.371
3) Other Material Support-Navigation Equipment																				
3.1) Stable Platform and Housing Material Kits <sup>(†)</sup>	A		369.378	37	13.667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) Shock Isolation System Kits <sup>(†)</sup>	A		749.714	28	20.992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.3) Factory Test Equipment	A		-	-	15.202	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.4) ESGN(R) Stable Platform & Housing	A		-	-	-	-	-	-	-	-	-	-	-	7.500	-	-	-	-	-	7.500

## UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4							P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip								Aggregated Items Title: Strategic Missile Systems 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 (\$ 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)
Mat. & Shock Isolation System Kits <sup>(6)</sup>																				
Subtotal: 3) Other Material Support- Navigation Equipment			-	-	49.861	-	-	-	-	-	-	-	-	7.500	-	-	-	-	-	7.500
4) Other Material Support- Instrumentation/Missile Checkout Equipment																				
4.1) Umbilical Sets/ Kits <sup>(7)(t)</sup>	A		2,312.000	7	16.184	1,300.000	1	1.300	1,756.000	1	1.756	1,791.000	1	1.791	-	-	-	1,791.000	1	1.791
4.2) Fire Suppression System	A		-	-	0.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.3) Electronic Documentation Refresh	A		-	-	1.852	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.4) Data System Integration	A		-	-	3.525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.5) Flight Test Instrumentation (FTI) Refresh <sup>(8)</sup>	A		-	-	56.365	-	-	4.926	-	-	24.888	-	-	8.668	-	-	-	-	-	8.668
4.6) Range Systems Refresh	A		-	-	1.161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) Other Material Support- Instrumentation/Missile Checkout Equipment			-	-	79.387	-	-	6.226	-	-	26.644	-	-	10.459	-	-	-	-	-	10.459
5) Other Material Support- Information Technology																				
5.1) Hardware/ Software IT Procurement <sup>(9)</sup>	A		-	-	38.057	-	-	7.572	-	-	4.137	-	-	4.660	-	-	-	-	-	4.660
Subtotal: 5) Other Material Support- Information Technology			-	-	38.057	-	-	7.572	-	-	4.137	-	-	4.660	-	-	-	-	-	4.660
6) Alterations-Launcher and Handling Equipment																				
6.1) Detonator Power Assembly SPALT	A		2,810.000	1	2.810	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.2) Detonator Relay Box SPALT	A		1,902.000	2	3.804	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.3) Hoist <sup>(t)</sup>	A		1,573.500	10	15.735	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.4) Launcher SPALTs <sup>(10)</sup>	A		-	-	88.432	-	-	9.036	-	-	9.217	-	-	10.667	-	-	-	-	-	10.667
Subtotal: 6) Alterations-Launcher and Handling Equipment			-	-	110.781	-	-	9.036	-	-	9.217	-	-	10.667	-	-	-	-	-	10.667
7) Alterations-Fire Control Equipment																				
7.1) Portable Computing Devices (PCD) Refresh SPALT	A		-	-	4.034	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.2) Minor SPALTS	A		-	-	57.433	-	-	12.558	-	-	17.071	-	-	17.412	-	-	-	-	-	17.412



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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4								P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip							Aggregated Items Title: Strategic Missile Systems 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 (\$ 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: 7) Alterations-Fire Control Equipment			-	-	61.467	-	-	12.558	-	-	17.071	-	-	17.412	-	-	-	-	-	17.412
8) Alterations-Navigation Equipment																				
8.1) Navigation Sonar System (NSS) Sensor Qualification	A		-	-	17.285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.2) Legacy ESGN SPALTs <sup>(11)</sup>	A		-	-	18.440	-	-	-	-	-	2.060	-	-	2.122	-	-	-	-	-	2.122
8.3) Transducer SPALTs <sup>(12)</sup>	A		-	-	14.501	-	-	1.260	-	-	3.040	-	-	10.856	-	-	-	-	-	10.856
8.4) Navigation Software SPALTs	A		-	-	21.986	-	-	5.757	-	-	5.113	-	-	5.215	-	-	-	-	-	5.215
8.5) GPS Antenna Refresh	A		-	-	5.525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.6) Broadband Navigation SONAR System	A		-	-	1.787	-	-	1.823	-	-	2.100	-	-	2.142	-	-	-	-	-	2.142
Subtotal: 8) Alterations-Navigation Equipment			-	-	79.524	-	-	8.840	-	-	12.313	-	-	20.335	-	-	-	-	-	20.335
9) Alterations-Instrumentation/Missile Checkout Equipment																				
9.1) Forecast Instrumentation SPALTs	A		-	-	8.461	-	-	0.854	-	-	3.000	-	-	3.060	-	-	-	-	-	3.060
Subtotal: 9) Alterations-Instrumentation/Missile Checkout Equipment			-	-	8.461	-	-	0.854	-	-	3.000	-	-	3.060	-	-	-	-	-	3.060
10) SSI Increment 8																				
10.1) Navigation SSI Increment 8 Pre-Production Gyroscope	A		400.000	30	12.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.2) Navigation SSI Increment 8 Pre-Production Inertial Navigation System	A		1,500.000	8	12.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.3) Navigation SSI Increment 8 Engineering and Test	A		-	-	371.415	-	-	11.253	-	-	-	-	-	-	-	-	-	-	-	-
10.4) Navigation SSI Increment 8 Independent verification and validation <sup>(13)</sup>	A		-	-	23.916	-	-	2.605	-	-	0.352	-	-	-	-	-	-	-	-	-
10.5) Navigation SSI Increment 8	A		537.042	166	89.149	258.364	44	11.368	-	-	9.359	-	-	5.485	-	-	-	-	-	5.485

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4								P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip							Aggregated Items Title: Strategic Missile Systems 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 (\$ 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)
Production Gyroscope (14)(t)																				
10.6) Navigation SSI Increment 8 On Board Repair Parts (OBRPs) (15)	A		-	-	34.522	-	-	8.234	-	-	7.736	-	-	-	-	-	-	-	-	-
10.7) Navigation SSI Increment 8 Production INS (16)(t)	A		3,061.545	11	33.677	2,960.400	10	29.604	2,947.364	11	32.421	-	-	-	-	-	-	-	-	-
10.8) Navigation SSI Increment 8 SHIPALT / Integration (17)	A		-	-	14.308	-	-	4.045	-	-	14.369	-	-	8.583	-	-	-	-	-	8.583
10.9) Navigation SSI Increment 8 Installation (18)	A		-	-	-	-	-	2.834	-	-	14.569	-	-	10.884	-	-	-	-	-	10.884
10.10) Gyroscope Fault Isolation Capability (19)	A		-	-	-	-	-	-	-	-	2.740	-	-	2.830	-	-	-	-	-	2.830
Subtotal: 10) SSI Increment 8			-	-	590.987	-	-	69.943	-	-	81.546	-	-	27.782	-	-	-	-	-	27.782
11) SSI Increment 11																				
11.1) Launcher SSI Increment 11 LIS Redesign	A		-	-	10.288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.2) Launcher Increment 11 System Integration Testing	A		-	-	5.404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.3) Launcher SSI Increment 11 LIS Support Equipment/ Fiberoptic Cables	A		-	-	3.496	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.4) Launcher SSI Increment 11 LIS Engineering and Test	A		-	-	10.973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.5) Launcher SSI Increment 11 Firing Units/Launch Safing Units(t)	A		1,781.200	20	35.624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.6) Launcher SSI Increment 11 LIS Fiberoptic Cables Installation	A		-	-	6.508	-	-	0.646	-	-	0.878	-	-	0.895	-	-	-	-	-	0.895
11.7) Fire Control SSI Increment 11 LIS SPALT Installs (20)	A		-	-	10.997	-	-	0.916	-	-	0.934	-	-	0.953	-	-	-	-	-	0.953

## UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4							P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip								Aggregated Items Title: Strategic Missile Systems 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 (\$ 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: 11) SSI Increment 11			-	-	83.290	-	-	1.562	-	-	1.812	-	-	1.848	-	-	-	-	-	1.848
12) SSI Increment 13																				
12.1) Instrumentation/ Missile SSI Increment 13 MTRE Refresh <sup>(21)</sup>	A		-	-	35.633	-	-	3.841	-	-	2.726	-	-	2.331	-	-	-	-	-	2.331
12.2) Navigation SSI Increment 13 Refresh/ Redesign	A		-	-	54.566	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.3) Navigation SSI Increment 13 Shipalt	A		-	-	0.575	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.4) Navigation SSI Increment 13 Independent Verification & Validation	A		-	-	0.880	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.5) Navigation SSI Increment 13 SPALT Kit Pre-Production <sup>(†)</sup>	A		536.000	6	3.216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.6) Navigation SSI Increment 13 On Board Repair Parts (OBRPs)	A		-	-	0.551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7) Fire Control SSI Increment 13 Refresh/ Redesign	A		-	-	87.110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.8) Fire Control SSI Increment 13 Electronics Refresh SPALT Kits <sup>(†)</sup>	A		2,487.118	17	42.281	1,755.500	6	10.533	-	-	-	-	-	-	-	-	-	-	-	-
12.9) Fire Control and Navigation SSI Increment 13 Installation <sup>(22)</sup>	A		-	-	5.449	-	-	1.689	-	-	6.806	-	-	0.958	-	-	-	-	-	0.958
Subtotal: 12) SSI Increment 13			-	-	230.261	-	-	16.063	-	-	9.532	-	-	3.289	-	-	-	-	-	3.289
13) SSI Increment 15																				
13.1) Navigation SSI Increment 15 Refresh/ Redesign	A		-	-	0.935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.2) Fire Control SSI Increment 15 Refresh/ Redesign <sup>(23)</sup>	A		-	-	66.143	-	-	28.474	-	-	15.705	-	-	8.263	-	-	-	-	-	8.263
13.3) Fire Control SSI Increment 15 Production <sup>(24)(†)</sup>	A		-	-	0.883	2,172.500	4	8.690	769.917	12	9.239	1,302.800	5	6.514	-	-	-	1,302.800	5	6.514

## UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4						P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip									Aggregated Items Title: Strategic Missile Systems 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 (\$ 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)
13.4) Launcher SSI Increment 15 Refresh & Systems Integration	A		-	-	3.176	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.5) Increment 15 Fire Control Installation <sup>(25)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	5.112	-	-	-	-	-	5.112
Subtotal: 13) SSI Increment 15			-	-	71.137	-	-	37.164	-	-	24.944	-	-	19.889	-	-	-	-	-	19.889
14) Shipboard Systems Modernization Portfolio (SSMP)																				
14.1) Advanced Development & Tech Maturation <sup>(26)</sup>	A		-	-	-	-	-	10.878	-	-	10.145	-	-	18.822	-	-	-	-	-	18.822
14.2) Shipboard Re-Architecture Design <sup>(27)</sup>	A		-	-	-	-	-	4.243	-	-	4.714	-	-	24.552	-	-	-	-	-	24.552
14.3) Obsolescence Management <sup>(28)</sup>	A		-	-	-	-	-	0.867	-	-	1.815	-	-	20.802	-	-	-	-	-	20.802
14.4) Capability Insertion <sup>(29)</sup>	A		-	-	-	-	-	0.636	-	-	0.839	-	-	18.321	-	-	-	-	-	18.321
Subtotal: 14) Shipboard Systems Modernization Portfolio (SSMP)			-	-	0.000	-	-	16.624	-	-	17.513	-	-	82.497	-	-	-	-	-	82.497
15) Training Support Equipment																				
15.1) Training Support Equipment <sup>(30)</sup>	A		-	-	144.842	-	-	9.720	-	-	9.914	-	-	12.029	-	-	-	-	-	12.029
Subtotal: 15) Training Support Equipment			-	-	144.842	-	-	9.720	-	-	9.914	-	-	12.029	-	-	-	-	-	12.029
16) Columbia Class																				
16.1) Columbia TRIPER spares <sup>(31)</sup>	A		-	-	-	-	-	14.785	-	-	2.334	-	-	54.487	-	-	-	-	-	54.487
16.2) SWSS Trainer Equipment <sup>(32)</sup>	A		-	-	-	-	-	9.198	-	-	11.737	-	-	6.947	-	-	-	-	-	6.947
Subtotal: 16) Columbia Class			-	-	0.000	-	-	23.983	-	-	14.071	-	-	61.434	-	-	-	-	-	61.434
Total			-	-	1,833.236	-	-	276.430	-	-	279.430	-	-	325.318	-	-	-	-	-	325.318

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) Gas Generator Production funding in FY 2024 decreases as no Gas Generators (GG) are procured, a decrease from 20 in FY 2023 in accordance with the revised acquisition strategy of alternate year procurements.

(2) Funding for the procurement and qualification of Gas Generator Case Hardware required to replace cases for expended/fired GGs. Funding in this category fluctuates year to year due to test schedules. Funding increases from FY 2023 to FY 2024 are to provide 18 refurbish cases from surface launch test facility test launches.

# UNCLASSIFIED

<b>Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy</b>		<b>Date: March 2023</b>
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 4	<b>P-1 Line Item Number / Title:</b> 5358 / Strategic Missile Systems Equip	<b>Aggregated Items Title:</b> Strategic Missile Systems Equip
<p>(3) Funding fluctuates annually based on specific maintenance projects necessary to correct environmental, safety, and energy conservation deficiencies. Increase from FY 2023 to FY 2024 is largely attributed to the Chiller Replacement for Ordinance Plant 1/2 for \$6M. Other major projects in FY 2024 include design/engineering &amp; install of the OP2 roof replacement (\$4.4M), design/engineering &amp; phase 1 underground security refresh/enhancements (\$1.6M). Various additional projects to include design/engineering &amp; restroom upgrade design/engineering &amp; office infrastructure refresh, security refresh/enhancements, UPS battery replacement load centers 1-3 &amp; 1-4, load center &amp; generator study, chiller water piping and emergent repairs.</p> <p>(4) Targeting software is used onboard a SSBN and sent to STRATCOM mission planning which develops Strategic war plan. Increase from FY 2023 to FY 2024 due to deployment and of X56 Fire Control software.</p> <p>(5) Decrease from FY 2023 to FY 2024 due to the completion of SPALT kit procurement in FY 2023.</p> <p>(6) Increase from FY 2023 to FY 2024 is due to procurement of Inertial Navigation System SPH refurbishment kits. In FY 2024, 4 INS refurbishment hardware kits and 1 kit of long lead material are procured. Kits contain gimbal assembly motors, angle readout assemblies, slip rings, water distribution assemblies, coolant case covers, fans, heat exchanger assemblies, thermal management assemblies, shock isolation refurbishment bearings and general refurbishment materials</p> <p>(7) Funding procures shipboard spare end items, to include umbilical cable shipsets, missile test and readiness equipment, equipment section body bridge support equipment, inspection gages, and personal access mats. In FY 2023 the increase is driven by a new spares requirement for the D5 Equipment Section Body Bridge.</p> <p>(8) FY 2024 refresh costs decrease due to a reduction in the number of systems being refreshed compared to FY 2023. In FY 2024, funding provides a refresh of launch area communication and position systems that are temporarily installed on the SSBN to support flight tests. The positioning system determines the location of the submarine via acoustic transponders and supplies this position to range safety systems in order to instantly acquire a Trident missile upon launch. The communication system allows for message transmission between the SSBN and our Launch Area Support Ship (LASS) via acoustic transducers and sonobuoys. This communication is essential for determining both SSBN and range readiness.</p> <p>(9) FY 2024 increases to begin refresh of IT hardware at SSP sites in Titusville, FL and Denver, CO.</p> <p>(10) Cost code 6.4 increases from FY 2023 to FY 2024 to fund the Mobile Test Bed Refresh Production and Accomplishment, Missile Away Simulator PAD Development, FUIITS PAD Development, FUFT PAD Development, LSU Test Fixture Development, Test Set Commonality Development, and Cooling Chamber Shipping Safety Cover development. These SPALTS are necessary to address aging and obsolescence issues.</p> <p>(11) FY 2024 increases efforts for ESGN Legacy SPALTs to support retrofit of hardware due to Increment 8 deployment.</p> <p>(12) Increase from FY 2023 to FY 2024 due to the procurement of 7 quantities of TR-143A SPALT, an increase of 2 quantities from FY 2023. Additionally FY 2024 begins two new refreshes - TDDSV4 Refresh which supports Top Secret media encryption of patrol data for SSI Inc 8 and 13 and NEDS refresh.</p> <p>(13) Decrease from FY 2023 to FY 2024 as SSI INC 8 IV&amp;V effort concluded in FY 2023.</p> <p>(14) Reduction from FY 2023 to FY 2024 as production activities ramp down, gyroscope costs support ongoing production through completion of final gyroscope delivery.</p> <p>(15) Decrease from FY 2023 to FY 2024 as OBRP procurement is completed.</p> <p>(16) Decrease from FY 2023 to FY 2024 as INS procurement is completed.</p> <p>(17) funding decreases from FY 2023 to FY 2024 following completion of Inc 8 prerequisite Fire Control SPALT 30409. Funding supports required alterations to the ship to facilitate INC 8 installation. In FY 2024, this funding support 5 SSBN SHIPALTS.</p> <p>(18) Decrease from FY 2023 to FY 2024 is due to completion of INC 8 enabling SPALT. Funding supports 5 installations in FY 2024.</p> <p>(19) Increase from FY 2023 to FY 2024 as establishment of Fault Isolation Capability ramps up. Total gyroscope quantity produced for Inc 8 have been decreased with the establishment of a fault isolation capability. Currently, for a gyro failure, current CONOPs requires removing and replacing all three gyroscopes. With a capability to diagnose which gyro is faulty, the non faulty gyros can be placed back into stock and therefore the total gyroscope production can be reduced as availability is increased.</p> <p>(20) FY 2024 continues installation of Fire Control Inc 11 SPALT kits.</p> <p>(21) FY 2024 effort decreases from FY 2023 as MTRE Refresh begins Phase 2 Proofing, Proofing Authentication, and Refresh 1 FC/MTRE Integration Testing.</p> <p>(22) Decrease from FY 2023 to FY 2024 as final installations of Fire Control Inc 13 SPALT complete.</p> <p>(23) Decrease from FY 2023 to FY 2024 reflects ramping down of development efforts. FY 2024 efforts include completion of verification and validation, and Fire Control and Shipboard Data System Software Development Readiness Review (SWDRR).</p> <p>(24) Program decreases from FY 2023 to FY 2024 due to a decrease in quantity of kits procured. FY 2024 kits include 5 tactical SPALT Kits, in addition to the final Lot of On Board Replacement Parts and spares for the Fire Control Kits. FY 2024 also includes shipboard data system material kits for 5 land based sites, 5 SSBNs, and associated SDS spares.</p> <p>(25) Increase from FY 2023 to FY 2024 is due to initiation of Increment 15 installations to include initial installation at one land based site. Installed equipment includes MIN Network Switch, Server, Portable Network Device and Portable Computing Devices, along with the mechanical mounting components and cabling and associated software.</p> <p>(26) Increase from FY 2023 to FY 2024 as FY 2023 efforts included capturing the shipboard architecture in a descriptive model, performing early technology trades, and early engineering efforts. FY 2024 builds upon those efforts to include refining the shipboard architectural descriptive model, performing technology trades to support common infrastructure development, evaluation of next-generation COTS technologies to replace those currently used in the SWS, and the development of core common infrastructure capabilities including General Purpose Computing, Virtualization, Secure Communications, System Timing, and Embedded Processing.</p>		

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 4	<b>P-1 Line Item Number / Title:</b> 5358 / Strategic Missile Systems Equip	<b>Aggregated Items Title:</b> Strategic Missile Systems Equip
<p><sup>(27)</sup> FY 2023 efforts began to develop the shipboard re-architecture which will maximize adaptability of the SWS to adapt to changing threats by enabling rapid deployment of cost effective solutions. FY 2024 efforts increase from FY 2023 to include pulling forward design elements from previous SSI/development programs (Cost Code 2.6 and 13.2) as well as core infrastructure capabilities (Cost Code 14.1) for integration as the first baseline of the General Purpose Computing (GPC). Specifically, FY 2024 will begin developmental activities associated with virtualization infrastructure, integration of cyber-security features, porting select SWS software to Linux-based virtual machines, establishing related software infrastructure, and developing the next generation workstation design. These development activities are the building blocks for the system re-architecture and form the foundation of the design for the GPC. The GPC and corresponding workstations are the first elements of the system that will be modified to begin implementation of the re-architecture and are planned to deploy in the mid-2020s.</p> <p><sup>(28)</sup> FY 2024 increase from FY 2023 as FY 2024 begins technology refresh of obsolete elements of the shipboard systems to ensure continued reliability and availability of the deployed SWS while maintaining compatibility with the pull through elements that are part of the COLUMBIA design. FY 2024 efforts include technology refreshes for elements of the SWS not refreshed by prior SSI increments. Specifically, FY 2024 includes effort to develop plans to resolve outstanding hardware replenishment requirements for non-inertial elements of the deployed tactical Navigation System, Fire Control System, and Shipboard Data System identified as at risk for obsolescence and includes the start of development of alterations to refresh those items.</p> <p><sup>(29)</sup> Increase from FY 2023 to FY 2024 as capability insertion efforts advance. FY 2024 efforts consist of incremental deployment of capabilities necessary to maintain SWS effectiveness against a changing threat environment. This includes product improvements and optimizations of the SWS to meet USSTRATCOM targeting objectives and counter emerging threats. In FY 2024 incremental capability insertions relate to SPOF functions designed to provide optimizations of SWS performance to meet USSTRATCOM targeting objectives. This effort builds on the initial development of SPOF that was separately funded (IOC in 2023) by integrating SPOF into the SWS Modernization Program and continuing agile software developments to deploy additional product improvements.</p> <p><sup>(30)</sup> FY 2024 increases from FY 2023 as efforts increase to support training for Increment 15. FY 2024 provides funds to update VIPr and SWIT simulations to match Inc 15 changes to SWS. Includes efforts to produce SPALT Proposal SPALT as well as participate in Inc 15 integrated process teams. Provides funds for WPC efforts and finalize trainer system specification requirements, develop facility drawings and SAT procedures, support RFT at TTF1. Provides funds for WPC efforts and initial trainer system specification requirements development.</p> <p><sup>(31)</sup> FY 2024 funds continue Kings Bay and Bangor Team Trainer procurements and TRIPER spares procurements. 2024 increases also include Industrial Plant Equipment procurement which will continue through 2043.</p> <p><sup>(32)</sup> FY 2023 funding reflects increase in material procurements of SWSS subcomponents required to ensure initial equipment is installed before building construction is complete (FY 2024) and is based on actuals from UK TTF.</p>		

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<b>Exhibit P-5a, Procurement History and Planning: PB 2024 Navy</b>									<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 4				<b>P-1 Line Item Number / Title:</b> 5358 / Strategic Missile Systems Equip					<b>Aggregated Items:</b> Strategic Missile Systems Equip			
Item Number / Title [DODIC]	O C O	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
<b>1) Other Material Support- Launcher and Handling Equipment</b>												
1.2) Gas Generator Production <sup>(1)</sup>		2016	NORTHROP GRUMMAN (33) / Rocket Center, WV	C / CPFF	Washington Navy Yard, DC	Mar 2016	Mar 2018	8	320.625	Y		
1.2) Gas Generator Production <sup>(1)</sup>		2017	NORTHROP GRUMMAN (33) / Rocket Center, WV	C / CPFF	Washington Navy Yard, DC	Mar 2017	Mar 2019	8	327.038	Y		
1.2) Gas Generator Production <sup>(1)</sup>		2018	NORTHROP GRUMMAN (33) / Rocket Center, WV	C / CPFF	Washington Navy Yard, DC	Mar 2018	Mar 2020	8	333.578	Y		
1.2) Gas Generator Production <sup>(1)</sup>		2019	NORTHROP GRUMMAN (33) / Rocket Center, WV	C / CPFF	Washington Navy Yard, DC	Mar 2019	Mar 2021	10	340.249	Y		
1.2) Gas Generator Production <sup>(1)</sup>		2020	NORTHROP GRUMMAN (33) / Rocket Center, WV	C / CPFF	Washington Navy Yard, DC	Mar 2020	Mar 2022	10	347.055	Y		
1.2) Gas Generator Production <sup>(1)</sup>		2021	NORTHROP GRUMMAN (33) / Rocket Center, WV	C / CPFF	Washington Navy Yard, DC	Mar 2021	Mar 2023	10	353.996	Y		
1.2) Gas Generator Production <sup>(1)</sup>		2023	NORTHROP GRUMMAN (33) / Rocket Center, WV	C / CPFF	Washington Navy Yard, DC	Mar 2023	Mar 2025	20	179.500	Y		
1.5) Ballast Production <sup>(†)</sup>		2017	Lockheed Martin / Sunnyvale, CA	C / CPIF	Washington Navy Yard, DC	Mar 2017	Mar 2018	15	437.000	Y		
1.5) Ballast Production <sup>(†)</sup>		2018	Lockheed Martin / Sunnyvale, CA	C / CPIF	Washington Navy Yard, DC	Mar 2018	Mar 2019	25	445.760	Y		
<b>3) Other Material Support-Navigation Equipment</b>												
3.1) Stable Platform and Housing Material Kits		2016	Boeing / Anaheim, CA	C / CPFF	Washington Navy Yard, DC	Oct 2015	Oct 2017	5	371.000	Y		
3.1) Stable Platform and Housing Material Kits		2017	Boeing / Anaheim, CA	C / CPFF	Washington Navy Yard, DC	Oct 2016	Oct 2018	2	378.000	Y		
3.1) Stable Platform and Housing Material Kits		2018	Boeing / Anaheim, CA	C / CPFF	Washington Navy Yard, DC	Oct 2017	Oct 2019	4	385.560	Y		
3.1) Stable Platform and Housing Material Kits		2019	Boeing / Anaheim, CA	C / CPFF	Washington Navy Yard, DC	Oct 2018	Oct 2020	4	393.271	Y		
3.2) Shock Isolation System Kits		2015	Boeing / Anaheim, CA	C / CPIF	Washington Navy Yard, DC	Feb 2015	Feb 2016	6	733.000	Y		
3.2) Shock Isolation System Kits		2016	Boeing / Anaheim, CA	C / CPIF	Washington Navy Yard, DC	Oct 2015	Oct 2016	6	747.000	Y		
3.2) Shock Isolation System Kits		2017	Boeing / Anaheim, CA	C / CPIF	Washington Navy Yard, DC	Oct 2016	Oct 2017	2	760.708	Y		
3.2) Shock Isolation System Kits		2018	Boeing / Anaheim, CA	C / CPIF	Washington Navy Yard, DC	Oct 2017	Oct 2018	4	775.922	Y		
3.2) Shock Isolation System Kits		2019	Boeing / Anaheim, CA	C / CPIF	Washington Navy Yard, DC	Oct 2018	Oct 2019	4	791.441	Y		

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning: PB 2024 Navy</b>									<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 4				<b>P-1 Line Item Number / Title:</b> 5358 / Strategic Missile Systems Equip					<b>Aggregated Items:</b> Strategic Missile Systems Equip			
<b>Item Number / Title [DODIC]</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
<b>4) Other Material Support- Instrumentation/Missile Checkout Equipment</b>												
4.1) Umbilical Sets/Kits <sup>(7)</sup>		2019	Lockheed Martin / Sunnyvale,CA	C / CPIF	Washington Navy Yard, DC	Oct 2018	Oct 2021	1	2,742.000	Y		
4.1) Umbilical Sets/Kits <sup>(7)</sup>		2020	Lockheed Martin / Sunnyvale,CA	C / CPIF	Washington Navy Yard, DC	Oct 2019	Oct 2022	1	2,797.000	Y		
4.1) Umbilical Sets/Kits <sup>(7)</sup>		2021	Lockheed Martin / Sunnyvale,CA	C / CPIF	Washington Navy Yard, DC	Oct 2020	Oct 2023	1	2,853.000	Y		
4.1) Umbilical Sets/Kits <sup>(7)</sup>		2022	Lockheed Martin / Sunnyvale,CA	C / CPIF	Washington Navy Yard, DC	Nov 2021	Nov 2024	1	1,300.000	Y		
4.1) Umbilical Sets/Kits <sup>(7)</sup>		2023	Lockheed Martin / Sunnyvale,CA	C / CPIF	Washington Navy Yard, DC	Oct 2022	Oct 2025	1	1,756.000	Y		
4.1) Umbilical Sets/Kits <sup>(7)</sup>		2024	Lockheed Martin / Sunnyvale,CA	C / CPFF	Washington Navy Yard, DC	Oct 2023	Oct 2026	1	1,791.000	Y		
<b>6) Alterations-Launcher and Handling Equipment</b>												
6.3) Hoist		2016	NORTHROP GRUMMAN / Sunnyvale, CA	C / CPFF	Washington Navy Yard, DC	Oct 2015	Jan 2018	2	1,613.000	Y		
<b>10) SSI Increment 8</b>												
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)(t)</sup>		2017	Lockheed Martin (SSI Increment #8 Gyroscope) / Mitchfield, NY	C / CPIF	Washington Navy Yard, DC	May 2017	May 2019	9	382.500	Y		
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)(t)</sup>		2018	Lockheed Martin (SSI Increment #8 Gyroscope) / Mitchfield, NY	C / CPIF	Washington Navy Yard, DC	Jan 2018	Jan 2020	24	431.458	Y		
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)(t)</sup>		2019	Lockheed Martin (SSI Increment #8 Gyroscope) / Mitchfield, NY	C / CPIF	Washington Navy Yard, DC	Nov 2018	Feb 2021	31	830.774	Y		
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)(t)</sup>		2020	Lockheed Martin (SSI Increment #8 Gyro Accel) / Mitchfield, NY	C / CPIF	Washington Navy Yard, DC	Jan 2020	Oct 2021	67	392.075	Y		
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)(t)</sup>		2021	Lockheed Martin (SSI Increment #8 Gyro Accel) / Mitchfield, NY	C / CPIF	Washington Navy Yard, DC	Jan 2021	Aug 2022	35	317.514	Y		
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)(t)</sup>		2022	Lockheed Martin (SSI Increment #8 Gyro Accel) / Mitchfield, NY	C / CPIF	Washington Navy Yard, DC	Nov 2021	May 2023	44	258.364	Y		
10.7) Navigation SSI Increment 8 Production INS <sup>(16)(t)</sup>		2019	Lockheed Martin (SSI Increment #8 Inertial Navigation System (INS)) / Mitchfield,NY	C / CPIF	Washington Navy Yard, DC	Nov 2018	Feb 2020	2	3,778.000	Y		
10.7) Navigation SSI Increment 8 Production INS <sup>(16)(t)</sup>		2021	Lockheed Martin (SSI Increment #8 Inertial Navigation System (INS)) / Mitchfield,NY	C / CPIF	Washington Navy Yard, DC	Jan 2021	Apr 2022	9	2,902.333	Y		
10.7) Navigation SSI Increment 8 Production INS <sup>(16)(t)</sup>		2022	Lockheed Martin (SSI Increment #8 Inertial Navigation System (INS)) / Mitchfield,NY	C / CPIF	Washington Navy Yard, DC	Nov 2021	Feb 2023	10	2,960.400	Y		



## UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy								Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4			P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip					Aggregated Items: Strategic Missile Systems Equip				
Item Number / Title [DODIC]	O C O	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
10.7) Navigation SSI Increment 8 Production INS <sup>(16)</sup> (†)		2023	Lockheed Martin (SSI Increment #8 Inertial Navigation System (INS)) / Mitchfield,NY	C / CPIF	Washington Navy Yard, DC	Oct 2022	Jan 2024	11	2,947.364	Y		
11) SSI Increment 11												
11.5) Launcher SSI Increment 11 Firing Units/Launch Safing Units <sup>(†)</sup>		2017	NORTHROP GRUMMAN (LIS Firing Units (FUs)/Launch Safing Units (LSUs) / Sunnyvale, CA	C / CPFF	Washington Navy Yard, DC	Nov 2016	Aug 2019	2	1,606.000	Y		
11.5) Launcher SSI Increment 11 Firing Units/Launch Safing Units <sup>(†)</sup>		2019	NORTHROP GRUMMAN (LIS Firing Units (FUs)/Launch Safing Units (LSUs) / Sunnyvale, CA	C / CPFF	Washington Navy Yard, DC	Feb 2019	Nov 2021	2	1,670.000	Y		
11.5) Launcher SSI Increment 11 Firing Units/Launch Safing Units <sup>(†)</sup>		2020	NORTHROP GRUMMAN (LIS Firing Units (FUs)/Launch Safing Units (LSUs) / Sunnyvale, CA	C / CPFF	Washington Navy Yard, DC	Nov 2019	Aug 2022	2	1,704.000	Y		
11.5) Launcher SSI Increment 11 Firing Units/Launch Safing Units		2021	NORTHROP GRUMMAN (LIS Firing Units (FUs)/Launch Safing Units (LSUs) / Sunnyvale, CA	C / CPFF	Washington Navy Yard, DC	Nov 2020	Aug 2023	2	1,789.000	Y		
12) SSI Increment 13												
12.5) Navigation SSI Increment 13 SPALT Kit Pre-Production <sup>(†)</sup>		2018	Lockheed Martin (SSI Increment #13 SPALT) / Mitchfield, NY	C / CPIF	Washington Navy Yard, DC	Jan 2018	Aug 2018	6	536.000	Y		
12.8) Fire Control SSI Increment 13 Electronics Refresh SPALT Kits <sup>(†)</sup>		2019	General Dynamics (SSI Increment #13 FC Electronic Refresh SPALT Kits) / Pittsfield, MA	C / CPIF	Washington Navy Yard, DC	Oct 2018	Oct 2019	6	2,349.167	Y		
12.8) Fire Control SSI Increment 13 Electronics Refresh SPALT Kits <sup>(†)</sup>		2020	General Dynamics (SSI Increment #13 FC Electronic Refresh SPALT Kits) / Pittsfield, MA	C / CPIF	Washington Navy Yard, DC	Oct 2019	Oct 2020	6	2,342.833	Y		
12.8) Fire Control SSI Increment 13 Electronics Refresh SPALT Kits <sup>(†)</sup>		2021	General Dynamics (SSI Increment #13 FC Electronic Refresh SPALT Kits) / Pittsfield, MA	C / CPIF	Washington Navy Yard, DC	Nov 2020	Nov 2021	5	2,825.800	Y		
12.8) Fire Control SSI Increment 13 Electronics Refresh SPALT Kits <sup>(†)</sup>		2022	General Dynamics (SSI Increment #13 FC Electronic Refresh SPALT Kits) / Pittsfield, MA	C / CPIF	Washington Navy Yard, DC	Nov 2021	Nov 2022	6	1,755.500	Y		
13) SSI Increment 15												
13.3) Fire Control SSI Increment 15 Production <sup>(24)</sup> (†)		2022	General Dynamics (SSI Increment #13 FC Electronic Refresh SPALT Kits) / Pittsfield, MA	C / CPFF	Washington Navy Yard, DC	Jul 2022	Sep 2023	4	2,172.500	Y		
13.3) Fire Control SSI Increment 15 Production <sup>(24)</sup> (†)		2023	General Dynamics (SSI Increment #13 FC Electronic Refresh SPALT Kits) / Pittsfield, MA	C / CPFF	Washington Navy Yard, DC	Oct 2022	Dec 2023	12	769.917	Y		
(†) indicates the presence of a P-21												

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4	P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip	Aggregated Items: Strategic Missile Systems Equip
<div>Footnotes:</div> <div>(33) Formerly known as Alliant Tech Systems</div>		

**UNCLASSIFIED**

LI 5358 - Strategic Missile Systems Equip  
Navy

**UNCLASSIFIED**  
Page 23 of 35

P-1 Line #104

Volume 4 - 89

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																			Date: March 2023																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4							P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip												Aggregated Items: Strategic Missile Systems Equip																	
Items (Units in Each)							Fiscal Year 2015												Fiscal Year 2016												BALANCE					
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015												Calendar Year 2016																	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						
	12	2022	NAVY	4	0	4																														4
	12	2023	NAVY	12	0	12																														12
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																							Date: March 2023																									
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4										P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip													Aggregated Items: Strategic Missile Systems Equip																									
Items <i>(Units in Each)</i>							Fiscal Year 2017												Fiscal Year 2018													BALANCE																
OCO#	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT				Calendar Year 2017												Calendar Year 2018																										
							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) Other Material Support- Launcher and Handling Equipment																																																
1.5) Ballast Production																																																
	5	2017	NAVY		15	0	15					A -	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	3	0																
	5	2018	NAVY		25	0	25														A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25												
10) SSI Increment 8																																																
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)</sup>																																																
	6	2017	NAVY		9	0	9					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9																
	6	2018	NAVY		24	0	24														A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24												
	6	2019	NAVY		31	0	31																																									31
	7	2020	NAVY		67	0	67																																									67
	7	2021	NAVY		35	0	35																																									35
	7	2022	NAVY		44	0	44																																									44
10.7) Navigation SSI Increment 8 Production INS <sup>(16)</sup>																																																
	8	2019	NAVY		2	0	2																																									2
	8	2021	NAVY		9	0	9																																									9
	8	2022	NAVY		10	0	10																																									10
	8	2023	NAVY		11	0	11																																									11
11) SSI Increment 11																																																
11.5) Launcher SSI Increment 11 Firing Units/Launch Safing Units																																																
Prior Years Deliveries: 12																																																
	9	2017	NAVY		2	0	2		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2																
	9	2019	NAVY		2	0	2																																								2	
	9	2020	NAVY		2	0	2																																								2	
12) SSI Increment 13																																																
12.5) Navigation SSI Increment 13 SPALT Kit Pre-Production																																																
	10	2018	NAVY		6	0	6														A -	-	-	-	-	-	-	-	-	-	-	1	1	4														
12.8) Fire Control SSI Increment 13 Electronics Refresh SPALT Kits																																																
	11	2019	NAVY		6	0	6																																								6	
	11	2020	NAVY		6	0	6																																								6	
	11	2021	NAVY		5	0	5																																								5	
	11	2022	NAVY		6	0	6																																								6	
13) SSI Increment 15																																																
13.3) Fire Control SSI Increment 15 Production <sup>(24)</sup>																																																
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																		

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																			Date: March 2023																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4							P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip													Aggregated Items: Strategic Missile Systems Equip															
Items (Units in Each)							Fiscal Year 2017													Fiscal Year 2018													B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
	12	2022	NAVY	4	0	4																													4
	12	2023	NAVY	12	0	12																													12
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2024 Navy																				Date: March 2023																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4										P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip										Aggregated Items: Strategic Missile Systems Equip																
Items <i>(Units in Each)</i>						Fiscal Year 2019														Fiscal Year 2020														BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019														Calendar Year 2020															
							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) Other Material Support- Launcher and Handling Equipment																																				
1.5) Ballast Production																																				
	5	2017	NAVY		15	0																												0		
	5	2018	NAVY		25	0	25	-	-	-	-	-	2	2	2	2	2	3	3	3	2	2											0			
10) SSI Increment 8																																				
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)</sup>																																				
	6	2017	NAVY		9	0	9	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1											0			
	6	2018	NAVY		24	0	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	6					
	6	2019	NAVY		31	0	31	A -		-	-	-	-	-	-	-	-	-	-	-	-											31				
	7	2020	NAVY		67	0	67															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	67
	7	2021	NAVY		35	0	35																											35		
	7	2022	NAVY		44	0	44																											44		
10.7) Navigation SSI Increment 8 Production INS <sup>(16)</sup>																																				
	8	2019	NAVY		2	0	2	A -		-	-	-	-	-	-	-	-	-	-	-	-	1	1											0		
	8	2021	NAVY		9	0	9																											9		
	8	2022	NAVY		10	0	10																											10		
	8	2023	NAVY		11	0	11																											11		
11) SSI Increment 11																																				
11.5) Launcher SSI Increment 11 Firing Units/Launch Safing Units																																				
Prior Years Deliveries: 12																																				
	9	2017	NAVY		2	0	2	-	-	-	-	-	-	-	-	-	1	1																	0	
	9	2019	NAVY		2	0	2	A -				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2					
	9	2020	NAVY		2	0	2													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
12) SSI Increment 13																																				
12.5) Navigation SSI Increment 13 SPALT Kit Pre-Production																																				
	10	2018	NAVY		6	2	4	1	1	1																								0		
12.8) Fire Control SSI Increment 13 Electronics Refresh SPALT Kits																																				
	11	2019	NAVY		6	0	6	A -	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1								0				
	11	2020	NAVY		6	0	6													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	
	11	2021	NAVY		5	0	5																											5		
	11	2022	NAVY		6	0	6																											6		
13) SSI Increment 15																																				
13.3) Fire Control SSI Increment 15 Production <sup>(24)</sup>																																				
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						

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Exhibit P-21, Production Schedule: PB 2024 Navy																			Date: March 2023														
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4							P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip													Aggregated Items: Strategic Missile Systems Equip													
Items (Units in Each)							Fiscal Year 2019													Fiscal Year 2020													B A L A N C E
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
	12	2022	NAVY	4	0	4																											4
	12	2023	NAVY	12	0	12																											12
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			



UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																								Date: March 2023											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4										P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip														Aggregated Items: Strategic Missile Systems Equip											
Items (Units in Each)							Fiscal Year 2021												Fiscal Year 2022													BALANCE			
OCO#	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021																		Calendar Year 2022										
							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) Other Material Support- Launcher and Handling Equipment																																			
1.5) Ballast Production																																			
	5	2017	NAVY		15	15	0																						0						
	5	2018	NAVY		25	25	0																						0						
10) SSI Increment 8																																			
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)</sup>																																			
	6	2017	NAVY		9	9	0																						0						
	6	2018	NAVY		24	18	6	2	2	2																			0						
	6	2019	NAVY		31	0	31	-	-	-	-	3	4	6	6	6	6												0						
	7	2020	NAVY		67	0	67	-	-	-	-	-	-	-	-	-	-	4	7	7	7	7	7	7	7	7	7	0							
	7	2021	NAVY		35	0	35	A -				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	21						
	7	2022	NAVY		44	0	44											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	44			
10.7) Navigation SSI Increment 8 Production INS <sup>(16)</sup>																																			
	8	2019	NAVY		2	2	0																						0						
	8	2021	NAVY		9	0	9	A -				-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	2	1	2	0					
	8	2022	NAVY		10	0	10											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	10			
	8	2023	NAVY		11	0	11																						11						
11) SSI Increment 11																																			
11.5) Launcher SSI Increment 11 Firing Units/Launch Safing Units																																			
Prior Years Deliveries: 12																																			
	9	2017	NAVY		2	2	0																						0						
	9	2019	NAVY		2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	1	1									0					
	9	2020	NAVY		2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0						
12) SSI Increment 13																																			
12.5) Navigation SSI Increment 13 SPALT Kit Pre-Production																																			
	10	2018	NAVY		6	6	0																						0						
12.8) Fire Control SSI Increment 13 Electronics Refresh SPALT Kits																																			
	11	2019	NAVY		6	6	0																						0						
	11	2020	NAVY		6	0	6	1	1	1	1	1	1																0						
	11	2021	NAVY		5	0	5	A -		-	-	-	-	-	-	-	-	-	1	1	1	1	1						0						
	11	2022	NAVY		6	0	6											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	6			
13) SSI Increment 15																																			
13.3) Fire Control SSI Increment 15 Production <sup>(24)</sup>																																			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																			Date: March 2023														
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4							P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip													Aggregated Items: Strategic Missile Systems Equip													
Items (Units in Each)							Fiscal Year 2021													Fiscal Year 2022													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
	12	2022	NAVY	4	0	4																											4
	12	2023	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			

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																							Date: March 2023										
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4										P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip													Aggregated Items: Strategic Missile Systems Equip										
Items <i>(Units in Each)</i>							Fiscal Year 2023												Fiscal Year 2024												BALANCE		
OCO#	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024														
							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) Other Material Support- Launcher and Handling Equipment																																	
1.5) Ballast Production																																	
	5	2017	NAVY		15	15	0																										0
	5	2018	NAVY		25	25	0																										0
10) SSI Increment 8																																	
10.5) Navigation SSI Increment 8 Production Gyroscope <sup>(14)</sup>																																	
	6	2017	NAVY		9	9	0																										0
	6	2018	NAVY		24	24	0																										0
	6	2019	NAVY		31	31	0																										0
	7	2020	NAVY		67	67	0																										0
	7	2021	NAVY		35	14	21	7	7	7																			0				
	7	2022	NAVY		44	0	44	-	-	-	-	-	7	7	7	7	7	7	2												0		
10.7) Navigation SSI Increment 8 Production INS <sup>(16)</sup>																																	
	8	2019	NAVY		2	2	0																										0
	8	2021	NAVY		9	9	0																										0
	8	2022	NAVY		10	0	10	-	-	-	-	1	1	1	1	1	1	1	1												0		
	8	2023	NAVY		11	0	11	A	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	2		
11) SSI Increment 11																																	
11.5) Launcher SSI Increment 11 Firing Units/Launch Safing Units																																	
Prior Years Deliveries: 12																																	
	9	2017	NAVY		2	2	0																										0
	9	2019	NAVY		2	2	0																										0
	9	2020	NAVY		2	2	0																										0
12) SSI Increment 13																																	
12.5) Navigation SSI Increment 13 SPALT Kit Pre-Production																																	
	10	2018	NAVY		6	6	0																										0
12.8) Fire Control SSI Increment 13 Electronics Refresh SPALT Kits																																	
	11	2019	NAVY		6	6	0																										0
	11	2020	NAVY		6	6	0																										0
	11	2021	NAVY		5	5	0																										0
	11	2022	NAVY		6	0	6	-	1	1	1	1	1	1																		0	
13) SSI Increment 15																																	
13.3) Fire Control SSI Increment 15 Production <sup>(24)</sup>																																	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2024 Navy																			Date: March 2023														
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4							P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip												Aggregated Items: Strategic Missile Systems Equip														
Items (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
	12	2022	NAVY	4	0	4	-	-	-	-	-	-	-	-	-	-	1	1	1	1													0
	12	2023	NAVY	12	0	12	A -	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	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			

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LI 5358 - Strategic Missile Systems Equip  
Navy

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Exhibit P-21, Production Schedule: PB 2024 Navy																	Date: March 2023																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 4							P-1 Line Item Number / Title: 5358 / Strategic Missile Systems Equip													Aggregated Items: Strategic Missile Systems Equip													
Items (Units in Each)							Fiscal Year 2025													Fiscal Year 2026													B A L A N C E
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025													Calendar Year 2026													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
	12	2022	NAVY	4	4	0																											0
	12	2023	NAVY	12	12	0																											0
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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<b>Exhibit P-21, Production Schedule:</b> PB 2024 Navy								<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 4				<b>P-1 Line Item Number / Title:</b> 5358 / Strategic Missile Systems Equip				<b>Aggregated Items:</b> Strategic Missile Systems Equip			

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2024	1-8-5 For 2024	MAX For 2024	Initial				Reorder			
					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 - Sunnyvale, CA	15	20	25	0	6	0	6	0	6	0	6
2	Lockheed Martin (SSI Increment #8 Gyroscope) - Mitchfield, NY	10	72	96	0	0	24	24	0	0	24	24
3	Lockheed Martin (SSI Increment #8 Gyro Accel) - Mitchfield, NY	36	72	108	0	0	18	18	0	0	18	18
4	Lockheed Martin (SSI Increment #8 Inertial Navigation System (INS)) - Mitchfield, NY	6	12	16	0	0	15	15	0	0	15	15
5	NORTHROP GRUMMAN (LIS Firing Units (FUs)/ Launch Safing Units (LSUs) - Sunnyvale, CA	2	4	15	0	0	12	12	0	0	9	9
6	Lockheed Martin (SSI Increment #13 SPALT) - Mitchfield, NY	3	5	7	0	0	7	7	0	0	7	7
7	General Dynamics (SSI Increment #13 FC Electronic Refresh SPALT Kits) - Pittsfield, MA	2	5	15	0	0	12	12	0	0	12	12
8	General Dynamics (SSI Increment #13 FC Electronic Refresh SPALT Kits) - Pittsfield, MA	1	8	15	0	0	14	14	0	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 04: Ordnance Support Equipment / BSA 5: ASW Support Equipment							P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: 0604562N				
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)	1,201.648	128.117	128.874	133.063	0.000	133.063	146.469	142.675	145.318	148.775	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,201.648	128.117	128.874	133.063	0.000	133.063	146.469	142.675	145.318	148.775	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,201.648	128.117	128.874	133.063	0.000	133.063	146.469	142.675	145.318	148.775	Continuing	Continuing
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	4.127	2.304	3.899	-	3.899	4.095	5.292	4.337	4.801	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The AN/BYG-1 is the combat control system common across all submarine platforms which incorporates tactical control, weapon/payload control and Tactical Local Area Network (TacLAN) functions into a single procurement program. AN/BYG-1 allows the submarine to rapidly update the ship-safety tactical picture, integrates the common tactical picture into the battlegroup, improves torpedo interfaces, and provides tactical TOMAHAWK and Harpoon capability. AN/BYG-1 systems will be continuously updated with hardware enhancements to address Commercial Off The Shelf (COTS) obsolescence, and provide capability improvements through software upgrades. Hardware updates are referred to as Tech Insertion (TI) kits and are differentiated by year of development (i.e. TI-18, TI-20, TI-22, TI-24, etc.). The TI upgrades provide the baseline for all future AN/BYG-1 procurements. AN/BYG-1 is part of the Submarine Warfare Federated Tactical Systems (SWFTS), a family of interdependent systems that conduct cooperative system development and installations. As a result of this interdependency, AN/BYG-1 installations must be performed in conjunction with the installations of the other SWFTS systems.  VB011 - COMBAT SYSTEMS TECHNOLOGY REFRESH / LEGACY INTEGRATION Procures Engineering Changes (EC) and Ordnance Alterations (ORDALT) to correct fleet reported problems with fielded AN/BYG-1 software and hardware. Procures Weapons Launch Systems and training systems, including the Multi-tube Weapon Simulator (MTWS) and the Onboard Team Trainer. Provides system engineering in support of TacLAN, and Cybersecurity for AN/BYG-1 authorization and accreditation. Procures Infrastructure COTS H/W in order to enable faster delivery, installation, and updating of developed systems to the warfighter by creating a cyber-resilient environment that links the system developers to the fielded systems. Procures TIH Modernization hardware to allow flexible, efficient utilization of the fielded computing systems, providing the opportunity for dynamic response and recovery when the system is under cyber-attack, and positioning SWFTS to leverage the developing fields of Artificial Intelligence and Machine Learning.  VB034 - SUBMARINE COMBAT CONTROL SYSTEM MODERNIZATION PROGRAM Procures hardware and software upgrades for AN/BYG-1 system for installation on all submarine platforms. Efforts include pre-production, design, hardware production, and integration. Funds are for the installation of Combat Control System equipment included in the Fleet Modernization Program.  Supply chain delays have increased from between 6 and 12 months to as much as 18 months. As a result, shipset deliveries starting in FY25 are now received in Q4 or later of a given fiscal year instead of what has in prior fiscal years been Q2 or later. Once delivered, these shipsets are sent to platforms in the same quarter instead of what has been done in the past prior to the supply chain delays.  VB800 - ELECTRONIC CHARTING DISPLAY INFORMATION SYSTEM												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 5: ASW Support Equipment		<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604562N
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>Procures the Submarine Electronic Charting Display Information System - Navy (ECDIS-N) on all U.S. Navy submarine platforms. PEO UWS Submarine Combat and Weapons Control Program Office has program acquisition, contractual, financial, engineering and logistical responsibilities for submarine ECDIS-N systems. This includes conducting submarine Voyage Management System (VMS) and Navy-ECDIS integration, testing, ECDIS-N certification, and fielding responsibilities in support of all baselines.</p> <p>VB995 PRODUCTION ENGINEERING AND INITIAL TRAINING - This cost code procures production and logistics support, assistance for asset management, cost analyses, preparation of contract specifications, monitoring of contract deliverables, contractor cost, schedule and performance monitoring, Integrated Logistics Support (ILS) planning and Government Furnished Information (GFI) coordination. This cost code also provides initial training curriculum development, training management materials, exercise control group development, and pilot services to the Fleet.</p> <p>VB997 - SSGN SUSTAINING SUPPORT Provides funding to the Strategic Systems Program (SSP) in support of the Equipment procurement, installation and sustainment required for the life-cycle operational support of SSGN Attack Weapons Systems (AWS) currently on four OHIO-class SSGNs. Funding provides the end of life technical refresh of critical components and maintain cyber security posture for to the Attack Weapon Control System (AWCS) and the Attack Weapons System Interface Simulator (AWIS). AWCS technical refresh includes Training Mode Enhancements and updates to Maintenance Interface Network requires an update to the operating system to maintain Missile Technician training on board the SSGN. These technical refreshes are schedule to be installed on the four SSGN's in FY24. Hardware and software refresh efforts continue for the AWIS in early - mid FY24, and installations begin in late FY24. Refreshes entail security updates, training screen enhancements, and hardware upgrades. The AWIS provides simulation and stimulation support for Operator &amp; Maintenance Training as well as system testing at the Trident Training Facility.</p> <p>VB700 - PAYLOAD PROCUREMENT Procurement of payloads to include Unmanned Aerial System (UAS) vehicles for integration, verification, and validation. Procurement entails integrated, modified, and tested horizontally and vertically deployed payloads.</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy								<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 5: ASW Support Equipment						<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0604562N				
<b>Line Item MDAP/MAIS Code:</b> 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	SSN Combat Control Systems	P-5a			- / 529.741	- / 87.370	- / 86.262	- / 50.305	- / -	- / 50.305
P-3a	1 / VB034 SSBN MODERNIZATION WITH AN/BYG-1 (UPGRADE)				- / 154.745	- / 7.080	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / VB034 SSBN MODERNIZATION TECH INSERTION (SSBN CLASS)				- / 0.000	- / 0.000	- / 0.000	- / 9.680	- / 0.000	- / 9.680
P-3a	3 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN21 CLASS (UPGRADE)				- / 35.776	- / 2.339	- / 7.942	- / 8.101	- / 0.000	- / 8.101
P-3a	4 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS (UPGRADE)				- / 312.282	- / 2.554	- / 22.246	- / 31.059	- / 0.000	- / 31.059
P-3a	5 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS (UPGRADE)				- / 134.295	- / 13.704	- / 3.569	- / 6.730	- / 0.000	- / 6.730
P-3a	6 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/CWL (UPGRADE)				- / 34.809	- / 15.070	- / 8.855	- / 27.188	- / 0.000	- / 27.188
P-40	<b>Total Gross/Weapon System Cost</b>				<b>- / 1,201.648</b>	<b>- / 128.117</b>	<b>- / 128.874</b>	<b>- / 133.063</b>	<b>- / 0.000</b>	<b>- / 133.063</b>
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	SSN Combat Control Systems	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / VB034 SSBN MODERNIZATION WITH AN/BYG-1 (UPGRADE)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 161.825
P-3a	2 / VB034 SSBN MODERNIZATION TECH INSERTION (SSBN CLASS)				- / 12.085	- / 14.281	- / 18.860	- / 17.204	- / 13.488	- / 85.598
P-3a	3 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN21 CLASS (UPGRADE)				- / 5.776	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 59.934
P-3a	4 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS (UPGRADE)				- / 4.134	- / 11.081	- / 28.506	- / 23.312	- / 8.950	- / 444.124
P-3a	5 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS (UPGRADE)				- / 17.724	- / 11.362	- / 0.000	- / 10.927	- / 12.059	- / 210.370
P-3a	6 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/CWL (UPGRADE)				- / 43.878	- / 51.778	- / 48.022	- / 41.626	- / 25.130	- / 296.356
P-40	<b>Total Gross/Weapon System Cost</b>				<b>- / 146.469</b>	<b>- / 142.675</b>	<b>- / 145.318</b>	<b>- / 148.775</b>	<b>Continuing</b>	<b>Continuing</b>
*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.										
<b>Justification:</b> FY 2024 funding supports the procurement of shipsets, and installations of shipsets procured in FY 2023. Specifically, FY 2024 procures three (3) SSBN Class, one (1) SSN 21 Class, one (1) SSN 688 Class, two (2) SSN 774 Class and four (4) SSN 774 Class w/ CWL.										

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy														Date: March 2023						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5						P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems								Aggregated Items Title: SSN Combat Control Systems						
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) VB011: COMBAT SYSTEM TECH REFRESH/LEGACY INTEGRATION																				
1.1) VB011: ECP/ AUXILLARY EQUIPMENT / LEGACY INTEGRATION	A		-	-	16.519	-	-	2.294	-	-	2.338	-	-	2.386	-	-	-	-	-	2.386
1.2) VB011: WEAPON LAUNCH SYSTEMS TECH INSERTION	A		-	-	117.969	-	-	11.505	-	-	11.757	-	-	11.993	-	-	-	-	-	11.993
1.3) VB011: TACLAN/ IA	A		-	-	192.019	-	-	13.767	-	-	14.070	-	-	14.351	-	-	-	-	-	14.351
1.4) VB011: INFRASTRUCTURE COTS HARDWARE	A		-	-	-	-	-	16.236	-	-	16.491	-	-	-	-	-	-	-	-	-
1.5) VB011: TIH MODERNIZATION <sup>(1)</sup>	A		-	-	-	-	-	28.068	-	-	32.154	-	-	9.035	-	-	-	-	-	9.035
Subtotal: 1) VB011: COMBAT SYSTEM TECH REFRESH/LEGACY INTEGRATION			-	-	326.507	-	-	71.870	-	-	76.810	-	-	37.765	-	-	-	-	-	37.765
2) VB800: ELECTRONIC CHARTING DISPLAY INFORMATION SYSTEM																				
2.1) VB800: ELECTRONIC CHARTING DISPLAY INFORMATION SYSTEM	A		-	-	19.619	-	-	3.538	-	-	3.616	-	-	3.688	-	-	-	-	-	3.688
Subtotal: 2) VB800: ELECTRONIC CHARTING DISPLAY INFORMATION SYSTEM			-	-	19.619	-	-	3.538	-	-	3.616	-	-	3.688	-	-	-	-	-	3.688
3) VB995: PRODUCTION ENGINEERING AND INITIAL TRAINING																				
3.1) VB995: PRODUCTION ENGINEERING AND INITIAL TRAINING	A		-	-	69.027	-	-	1.860	-	-	1.901	-	-	1.939	-	-	-	-	-	1.939
Subtotal: 3) VB995: PRODUCTION ENGINEERING AND INITIAL TRAINING			-	-	69.027	-	-	1.860	-	-	1.901	-	-	1.939	-	-	-	-	-	1.939
4) VB997: SSGN SUSTAINING SUPPORT																				
4.1) VB997: SSGN SUSTAINING SUPPORT <sup>(2)</sup>	A		-	-	106.295	-	-	4.426	-	-	1.034	-	-	1.055	-	-	-	-	-	1.055
Subtotal: 4) VB997: SSGN SUSTAINING SUPPORT			-	-	106.295	-	-	4.426	-	-	1.034	-	-	1.055	-	-	-	-	-	1.055
5) VB700: PAYLOAD PROCUREMENT																				
5.1) VB700: PAYLOAD PROCUREMENT <sup>(†)</sup>	A		921,444.44	9	8.293	946,045.70	6	5.676	966,859.00	3	2.901	976,333.00	6	5.858	-	-	-	976,333.00	6	5.858

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5						P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems									Aggregated Items Title: SSN Combat Control Systems					
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) VB700: PAYLOAD PROCUREMENT			-	-	8.293	-	-	5.676	-	-	2.901	-	-	5.858	-	-	-	-	-	5.858
Total			-	-	529.741	-	-	87.370	-	-	86.262	-	-	50.305	-	-	-	-	-	50.305

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 Navy decreased funding in FY24 for TIH MODERNIZATION due to accelerated hardware procurements in FY23 to provide improvements for the Common Computing Environment to improve cybersecurity via a Resiliency Cluster Environment that will allow the Fleet to respond to a cyberattack while still executing their mission.

(2) (SSP) The modernized TOMAHAWK supports emerging missions for which the SSGN is the prime platform for deployment.

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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy									Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5				P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems					Aggregated Items: SSN Combat Control Systems			
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
5) VB700: PAYLOAD PROCUREMENT												
5.1) VB700: PAYLOAD PROCUREMENT		2020	NAVSEA / Washington, DC	WR	** NO PCO **	Nov 2019	May 2020	3	909,309.60	N	Oct 2019	
5.1) VB700: PAYLOAD PROCUREMENT		2021	NAVSEA / Washington, DC	WR	** NO PCO **	Nov 2021	May 2022	6	927,495.80	N	Oct 2020	
5.1) VB700: PAYLOAD PROCUREMENT		2022	Sparton/Aerovironment / De leon Springs, FL /Simi Valley, CA	C / IDIQ	NAVSEA, Washington DC	Nov 2021	May 2022	6	946,045.70	N	Oct 2021	
5.1) VB700: PAYLOAD PROCUREMENT		2023	Sparton/Aerovironment / De leon Springs, FL /Simi Valley, CA	C / IDIQ	NAVSEA, Washington DC	Nov 2022	May 2023	3	966,859.00	N	Oct 2022	
5.1) VB700: PAYLOAD PROCUREMENT		2024	Sparton / De leon Springs, FL	C / IDIQ	NAVSEA, Washington DC	Nov 2023	May 2024	6	976,333.00	N	Oct 2023	

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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5				P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems						Modification Number / Title: 1 / VB034 SSBN MODERNIZATION WITH AN/BYG-1		
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)	154.745	7.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	161.825
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	154.745	7.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	161.825
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	154.745	7.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	161.825
(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 program will provide submarine combat control systems with COTS-based upgrades to combat control and tactical control hardware and software. [EQUIPMENT] This program will provide submarine combat control systems with COTS-based upgrades to combat control and tactical control hardware and software.												

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5				<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems						<b>Modification Number / Title:</b> 1 / VB034 SSBN MODERNIZATION WITH AN/BYG-1			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> SSBN CLASS				<b>Modification Type:</b> UPGRADE				<b>Related RDT&amp;E PEs:</b> 0604562N					
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)	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> VB034 SSBN MODERNIZATION WITH AN/BYG-1													
B Kits													
Recurring													
1.1.1) EQUIPMENT - NonOrganic	14 / 61.002	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 61.002	
<i>Subtotal: Recurring</i>	- / 61.002	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 61.002	
<i>Subtotal: VB034 SSBN MODERNIZATION WITH AN/ BYG-1</i>	14 / 61.002	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 61.002	
<i>Subtotal: Procurement, All Modification Items</i>	- / 61.002	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 61.002	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> VB034 SSBN MODERNIZATION WITH AN/BYG-1	- / 93.743	- / 7.080	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 100.823	
<i>Subtotal: Installation</i>	- / 93.743	- / 7.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 100.823	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>154.745</b>	<b>7.080</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>161.825</b>	



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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5										P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems										Modification Number / Title: 1 / VB034 SSBN MODERNIZATION WITH AN/BYG-1											
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:																
Modification Item 1 of 1: VB034 SSBN MODERNIZATION WITH AN/BYG-1																															
Manufacturer Information																															
Manufacturer Name: Various															Manufacturer Location: Various																
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: AIT:: Installation Name: 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		13 / 93.743		1 / 7.080		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		14 / 100.823							
FY 2022		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2023		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		13 / 93.743		1 / 7.080		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		14 / 100.823							
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14		
Out	13	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14		

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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5				P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems						Modification Number / Title: 2 / VB034 SSBN MODERNIZATION TECH INSERTION		
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 ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.000	0.000	9.680	0.000	9.680	12.085	14.281	18.860	17.204	13.488	85.598
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.000	0.000	9.680	0.000	9.680	12.085	14.281	18.860	17.204	13.488	85.598
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority ( <i>\$ in Millions</i> )	0.000	0.000	0.000	9.680	0.000	9.680	12.085	14.281	18.860	17.204	13.488	85.598
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**  
This program will provide submarine combat control systems with COTS-based upgrades to combat control and tactical control hardware and software.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5				<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems						<b>Modification Number / Title:</b> 2 / VB034 SSBN MODERNIZATION TECH INSERTION			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> SSBN CLASS				<b>Modification Type:</b> SSBN CLASS				<b>Related RDT&amp;E PEs:</b> 0604562N					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> VB034 SSBN MODERNIZATION TECH INSERTION													
B Kits													
Recurring													
1.1.1) EQUIPMENT - NonOrganic <sup>(3)</sup>	- / -	- / -	- / -	3 / 5.635	- / -	3 / 5.635	2 / 3.833	3 / 5.863	3 / 5.981	2 / 4.067	- / -	13 / 25.379	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 5.635	- / -	- / 5.635	- / 3.833	- / 5.863	- / 5.981	- / 4.067	- / 0.000	- / 25.379	
<i>Subtotal: VB034 SSBN MODERNIZATION TECH INSERTION</i>	- / -	- / -	- / -	3 / 5.635	- / -	3 / 5.635	2 / 3.833	3 / 5.863	3 / 5.981	2 / 4.067	- / -	13 / 25.379	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 5.635	- / -	- / 5.635	- / 3.833	- / 5.863	- / 5.981	- / 4.067	- / 0.000	- / 25.379	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> VB034 SSBN MODERNIZATION TECH INSERTION	- / 0.000	- / 0.000	- / 0.000	- / 4.045	- / 0.000	- / 4.045	- / 8.252	- / 8.418	- / 12.879	- / 13.137	- / 13.488	- / 60.219	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 4.045	- / -	- / 4.045	- / 8.252	- / 8.418	- / 12.879	- / 13.137	- / 13.488	- / 60.219	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>9.680</b>	<b>0.000</b>	<b>9.680</b>	<b>12.085</b>	<b>14.281</b>	<b>18.860</b>	<b>17.204</b>	<b>13.488</b>	<b>85.598</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy												<b>Date:</b> March 2023																			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5										<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems										<b>Modification Number / Title:</b> 2 / VB034 SSBN MODERNIZATION TECH INSERTION											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :														<b>MDAP/MAIS Code:</b>																	
<b>Modification Item 1 of 1:</b> VB034 SSBN MODERNIZATION TECH INSERTION																															
<b>Manufacturer Information</b>																															
Manufacturer Name: VARIOUS														Manufacturer Location: Various																	
Administrative Leadtime (in Months): 6														Production Leadtime (in Months): 18																	
<b>Dates</b>		<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>					
Contract Dates										Jan 2024				Jan 2025				Jan 2026				Jan 2027				Jan 2028					
Delivery Dates										Jul 2025				Jul 2026				Jul 2027				Jul 2028				Jul 2029					
<b>Installation Information</b>																															
<b>Method of Implementation:</b> [none specified]:: Installation Name: EQUIPMENT																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>		<b>FY 2025</b>		<b>FY 2026</b>		<b>FY 2027</b>		<b>FY 2028</b>		<b>To Complete</b>		<b>Total</b>							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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		- / -		- / -		- / -		1 / 4.045		0 / 0.000		1 / 4.045		2 / 8.252		1 / 4.209		- / -		- / -		0 / 0.000		4 / 16.506							
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 4.209		1 / 4.293		- / -		0 / 0.000		2 / 8.502							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		2 / 8.586		1 / 4.379		0 / 0.000		3 / 12.965							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		2 / 8.758		1 / 4.466		3 / 13.224							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		2 / 9.022		2 / 9.022							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		- / -		- / -		- / -		1 / 4.045		0 / 0.000		1 / 4.045		2 / 8.252		2 / 8.418		3 / 12.879		3 / 13.137		3 / 13.488		14 / 60.219							
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	1	-	-	1	1	-	-	2	1	-	-	2	3	14
Out	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	2	1	-	-	1	1	-	-	2	1	-	-	2	3	14
<b>Footnotes:</b>																															
<sup>(3)</sup> The quantity (1) installation in FY24 is not preceded by the typical prior-year shipset procurement. This is a unique situation in which the shipset being installed represents an amalgamation of two SSN688 class shipsets that have been removed from their respective platforms as part of the normal SSN688 class modernization process. These two shipsets are being recapitalized for the SSBN Modernization. This allows the Navy to save costs on procurement of the SSBN Modernization shipset. Supply chain delays have increased from between 6 and 12 months to as much as 18 months. As a result, shipset deliveries																															

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5	<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems	<b>Modification Number / Title:</b> 2 / VB034 SSBN MODERNIZATION TECH INSERTION
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
<p>starting in FY25 are now received in Q4 or later of a given fiscal year instead of what has in prior fiscal years been Q2 or later. Once delivered, these shipsets are sent to platforms in the same quarter instead of what has been done in the past prior to the supply chain delays. In order to maintain installation schedules, the Navy has created efficiencies to reduce the time between delivery of shipsets ("In") and installation of shipsets ("Out") to occur in the same quarter. Note: While one shipset procured in FY24 will be installed in FY26, that shipset cannot be procured in FY25 due to its early-FY26 need date combined with the 18-month shipset lead time.</p>		

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Exhibit P-3a, Individual Modification: PB 2024 Navy								Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5				P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems				Modification Number / Title: 3 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN21 CLASS				
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 ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	35.776	2.339	7.942	8.101	0.000	8.101	5.776	0.000	0.000	0.000	0.000	59.934
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	35.776	2.339	7.942	8.101	0.000	8.101	5.776	0.000	0.000	0.000	0.000	59.934
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority ( <i>\$ in Millions</i> )	35.776	2.339	7.942	8.101	0.000	8.101	5.776	0.000	0.000	0.000	0.000	59.934
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Description: This program will provide submarine combat control systems with COTS-based upgrades to combat control and tactical control hardware and software.												

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5				<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems						<b>Modification Number / Title:</b> 3 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN21 CLASS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> UPGRADES FROM TI04 AND OUT BASELINE SSN21 CLASS				<b>Modification Type:</b> UPGRADE				<b>Related RDT&amp;E PEs:</b> 0604562N					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN21 CLASS													
B Kits													
Recurring													
1.1.1) EQUIPMENT - NonOrganic <sup>(4)</sup>	6 / 16.544	1 / 2.339	1 / 2.390	1 / 2.438	- / -	1 / 2.438	- / -	- / -	- / -	- / -	- / -	9 / 23.711	
<i>Subtotal: Recurring</i>	- / 16.544	- / 2.339	- / 2.390	- / 2.438	- / -	- / 2.438	- / -	- / -	- / -	- / -	- / 0.000	- / 23.711	
<i>Subtotal: VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN21 CLASS</i>	6 / 16.544	1 / 2.339	1 / 2.390	1 / 2.438	- / -	1 / 2.438	- / -	- / -	- / -	- / -	- / -	9 / 23.711	
<i>Subtotal: Procurement, All Modification Items</i>	- / 16.544	- / 2.339	- / 2.390	- / 2.438	- / -	- / 2.438	- / -	- / -	- / -	- / -	- / 0.000	- / 23.711	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN21 CLASS	- / 19.232	- / 0.000	- / 5.552	- / 5.663	- / 0.000	- / 5.663	- / 5.776	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 36.223	
<i>Subtotal: Installation</i>	- / 19.232	- / -	- / 5.552	- / 5.663	- / -	- / 5.663	- / 5.776	- / -	- / -	- / -	- / 0.000	- / 36.223	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>35.776</b>	<b>2.339</b>	<b>7.942</b>	<b>8.101</b>	<b>0.000</b>	<b>8.101</b>	<b>5.776</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>59.934</b>	

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Exhibit P-3a, Individual Modification: PB 2024 Navy

Date: March 2023

Appropriation / Budget Activity / Budget Sub Activity:  
1810N / 04 / 5

P-1 Line Item Number / Title:  
5420 / SSN Combat Control Systems

Modification Number / Title:  
3 / VB034 UPGRADES FROM TI04 AND  
OUT BASELINE SSN21 CLASS

ID Code (A=Service Ready, B=Not Service Ready) :

MDAP/MAIS Code:

Modification Item 1 of 1: VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN21 CLASS

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	Mar 2022	Mar 2023	Jan 2024				
Delivery Dates	Mar 2023	Mar 2024	Jul 2025				

Installation Information

Method of Implementation: AIT:: Installation Name: 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	6 / 19.232	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 19.232
FY 2022	- / -	- / -	1 / 5.552	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 5.552
FY 2023	- / -	- / -	- / -	1 / 5.663	0 / 0.000	1 / 5.663	- / -	- / -	- / -	- / -	0 / 0.000	1 / 5.663
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.776	- / -	- / -	- / -	0 / 0.000	1 / 5.776
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 19.232	- / -	1 / 5.552	1 / 5.663	0 / 0.000	1 / 5.663	1 / 5.776	- / -	- / -	- / -	0 / 0.000	9 / 36.223

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	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	9		
Out	6	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	9		

Footnotes:

(4) Supply chain delays have increased from between 6 and 12 months to as much as 18 months. As a result, shipset deliveries starting in FY25 are now received in Q4 or later of a given fiscal year instead of what has in prior fiscal years been Q2 or later. Once delivered, these shipsets are sent to platforms in the same quarter instead of what has been done in the past prior to the supply chain delays. In order to maintain installation schedules, the Navy has created efficiencies to reduce the time between delivery of shipsets ("In") and installation of shipsets ("Out") to occur in the same quarter.



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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5				P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems						Modification Number / Title: 4 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS		
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)	312.282	2.554	22.246	31.059	0.000	31.059	4.134	11.081	28.506	23.312	8.950	444.124
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	312.282	2.554	22.246	31.059	0.000	31.059	4.134	11.081	28.506	23.312	8.950	444.124
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	312.282	2.554	22.246	31.059	0.000	31.059	4.134	11.081	28.506	23.312	8.950	444.124
(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 program will provide submarine combat control systems with COTS-based upgrades to combat control and tactical control hardware and software.												

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5				<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems						<b>Modification Number / Title:</b> 4 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS				<b>Modification Type:</b> UPGRADE				<b>Related RDT&amp;E PEs:</b> 0604562N					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS													
B Kits													
Recurring													
1.1.1) EQUIPMENT - NonOrganic <sup>(5)</sup>	54 / 157.449	1 / 2.554	7 / 18.272	1 / 2.662	- / -	1 / 2.662	- / -	4 / 11.081	4 / 11.301	2 / 5.764	- / -	73 / 209.083	
<i>Subtotal: Recurring</i>	- / 157.449	- / 2.554	- / 18.272	- / 2.662	- / -	- / 2.662	- / -	- / 11.081	- / 11.301	- / 5.764	- / 0.000	- / 209.083	
<i>Subtotal: VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS</i>	54 / 157.449	1 / 2.554	7 / 18.272	1 / 2.662	- / -	1 / 2.662	- / -	4 / 11.081	4 / 11.301	2 / 5.764	- / -	73 / 209.083	
<i>Subtotal: Procurement, All Modification Items</i>	- / 157.449	- / 2.554	- / 18.272	- / 2.662	- / -	- / 2.662	- / -	- / 11.081	- / 11.301	- / 5.764	- / 0.000	- / 209.083	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS	- / 154.833	- / 0.000	- / 3.974	- / 28.397	- / 0.000	- / 28.397	- / 4.134	- / 0.000	- / 17.205	- / 17.548	- / 8.950	- / 235.041	
<i>Subtotal: Installation</i>	- / 154.833	- / -	- / 3.974	- / 28.397	- / -	- / 28.397	- / 4.134	- / -	- / 17.205	- / 17.548	- / 8.950	- / 235.041	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>312.282</b>	<b>2.554</b>	<b>22.246</b>	<b>31.059</b>	<b>0.000</b>	<b>31.059</b>	<b>4.134</b>	<b>11.081</b>	<b>28.506</b>	<b>23.312</b>	<b>8.950</b>	<b>444.124</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy											<b>Date:</b> March 2023																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5											<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems											<b>Modification Number / Title:</b> 4 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :																<b>MDAP/MAIS Code:</b>																
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN688 CLASS																																
<b>Manufacturer Information</b>																																
Manufacturer Name: Various														Manufacturer Location: Various																		
Administrative Leadtime <i>(in Months)</i> : 6														Production Leadtime <i>(in Months)</i> : 18																		
<b>Dates</b>		<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>						
Contract Dates		Mar 2022				Mar 2023				Jan 2024								Jan 2026				Jan 2027				Jan 2028						
Delivery Dates		Mar 2023				Mar 2024				Jul 2025								Jul 2027				Jul 2028				Jul 2029						
<b>Installation Information</b>																																
<b>Method of Implementation:</b> AIT:: Installation Name: EQUIPMENT																																
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>		<b>FY 2025</b>		<b>FY 2026</b>		<b>FY 2027</b>		<b>FY 2028</b>		<b>To Complete</b>		<b>Total</b>								
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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		54 / 154.833		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		54 / 154.833						
FY 2022		- / -		- / -		1 / 3.974		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		1 / 3.974						
FY 2023		- / -		- / -		- / -		7 / 28.397		0 / 0.000		7 / 28.397		- / -		- / -		- / -		- / -		- / -		0 / 0.000		7 / 28.397						
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		1 / 4.134		- / -		- / -		- / -		- / -		0 / 0.000		1 / 4.134						
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		4 / 17.205		- / -		0 / 0.000		4 / 17.205						
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		4 / 17.548		0 / 0.000		4 / 17.548						
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		2 / 8.950		2 / 8.950						
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -						
Total		54 / 154.833		- / -		1 / 3.974		7 / 28.397		0 / 0.000		7 / 28.397		1 / 4.134		- / -		4 / 17.205		4 / 17.548		2 / 8.950		73 / 235.041								
<b>Installation Schedule</b>																																
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>	
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
In	54	-	-	-	-	-	1	-	-	-	3	4	-	-	-	-	1	-	-	-	-	-	-	-	4	-	-	-	4	2	73	
Out	54	-	-	-	-	-	-	1	-	-	-	3	4	-	-	-	1	-	-	-	-	-	-	-	4	-	-	-	4	2	73	
<b>Footnotes:</b> <sup>(5)</sup> Supply chain delays have increased from between 6 and 12 months to as much as 18 months. As a result, shipset deliveries starting in FY25 are now received in Q4 or later of a given fiscal year instead of what has in prior fiscal years been Q2 or later. Once delivered, these shipsets are sent to platforms in the same quarter instead of what has been done in the past prior to the supply chain delays. In order to maintain installation schedules, the Navy has created efficiencies to reduce the time between delivery of shipsets ("In") and installation of shipsets ("Out") to occur in the same quarter.																																

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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5				P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems						Modification Number / Title: 5 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS		
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)	134.295	13.704	3.569	6.730	0.000	6.730	17.724	11.362	0.000	10.927	12.059	210.370
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	134.295	13.704	3.569	6.730	0.000	6.730	17.724	11.362	0.000	10.927	12.059	210.370
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	134.295	13.704	3.569	6.730	0.000	6.730	17.724	11.362	0.000	10.927	12.059	210.370
(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 program will provide submarine combat control systems with COTS-based upgrades to combat control and tactical control hardware and software.												

## UNCLASSIFIED

<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5				<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems						<b>Modification Number / Title:</b> 5 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS				<b>Modification Type:</b> UPGRADE				<b>Related RDT&amp;E PEs:</b> 0604562N					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS													
B Kits													
Recurring													
1.1.1) EQUIPMENT - NonOrganic <sup>(6)</sup>	17 / 108.900	1 / 3.228	- / -	2 / 6.730	- / -	2 / 6.730	3 / 10.297	- / -	- / -	3 / 10.927	- / -	26 / 140.082	
<i>Subtotal: Recurring</i>	- / 108.900	- / 3.228	- / -	- / 6.730	- / -	- / 6.730	- / 10.297	- / -	- / -	- / 10.927	- / 0.000	- / 140.082	
<i>Subtotal: VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS</i>	17 / 108.900	1 / 3.228	- / -	2 / 6.730	- / -	2 / 6.730	3 / 10.297	- / -	- / -	3 / 10.927	- / -	26 / 140.082	
<i>Subtotal: Procurement, All Modification Items</i>	- / 108.900	- / 3.228	- / -	- / 6.730	- / -	- / 6.730	- / 10.297	- / -	- / -	- / 10.927	- / 0.000	- / 140.082	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS	- / 25.395	- / 10.476	- / 3.569	- / 0.000	- / 0.000	- / 0.000	- / 7.427	- / 11.362	- / 0.000	- / 0.000	- / 12.059	- / 70.288	
<i>Subtotal: Installation</i>	- / 25.395	- / 10.476	- / 3.569	- / -	- / -	- / -	- / 7.427	- / 11.362	- / -	- / -	- / 12.059	- / 70.288	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>134.295</b>	<b>13.704</b>	<b>3.569</b>	<b>6.730</b>	<b>0.000</b>	<b>6.730</b>	<b>17.724</b>	<b>11.362</b>	<b>0.000</b>	<b>10.927</b>	<b>12.059</b>	<b>210.370</b>	

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Exhibit P-3a, Individual Modification: PB 2024 Navy											Date: March 2023																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5										P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems										Modification Number / Title: 5 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS											
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:																
Modification Item 1 of 1: VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS																															
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		Mar 2022								Jan 2024				Jan 2025												Jan 2028					
Delivery Dates		Mar 2023								Jul 2025				Jul 2026												Jul 2029					
Installation Information																															
Method of Implementation: AIT:: Installation Name: 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		14 / 25.395		3 / 10.476		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		17 / 35.871							
FY 2022		- / -		- / -		1 / 3.569		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		1 / 3.569							
FY 2023		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		2 / 7.427		- / -		- / -		- / -		0 / 0.000		2 / 7.427							
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		3 / 11.362		- / -		- / -		0 / 0.000		3 / 11.362							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		3 / 12.059		3 / 12.059							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		14 / 25.395		3 / 10.476		1 / 3.569		- / -		- / -		- / -		2 / 7.427		3 / 11.362		- / -		- / -		3 / 12.059		26 / 70.288							
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	14	-	1	2	-	-	1	-	-	-	-	-	-	-	-	-	2	-	-	-	3	-	-	-	-	-	-	-	3	26	
Out	14	-	-	1	2	-	-	1	-	-	-	-	-	-	-	-	2	-	-	-	3	-	-	-	-	-	-	-	3	26	
Footnotes:																															
<sup>(6)</sup> Supply chain delays have increased from between 6 and 12 months to as much as 18 months. As a result, shipset deliveries starting in FY25 are now received in Q4 or later of a given fiscal year instead of what has in prior fiscal years been Q2 or later. Once delivered, these shipsets are sent to platforms in the same quarter instead of what has been done in the past prior to the supply chain delays. In order to maintain installation schedules, the Navy has created efficiencies to reduce the time between delivery of shipsets ("In") and installation of shipsets ("Out") to occur in the same quarter.																															

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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5				P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems						Modification Number / Title: 6 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/ CWL		
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 ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	34.809	15.070	8.855	27.188	0.000	27.188	43.878	51.778	48.022	41.626	25.130	296.356
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	34.809	15.070	8.855	27.188	0.000	27.188	43.878	51.778	48.022	41.626	25.130	296.356
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority ( <i>\$ in Millions</i> )	34.809	15.070	8.855	27.188	0.000	27.188	43.878	51.778	48.022	41.626	25.130	296.356
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**  
This program will provide submarine combat control systems with COTS-based upgrades to combat control and tactical control hardware and software and Common Weapon Launcher (CWL).

SSN774 Class w/ CWL costs are greater than the costs for SSN774 Class (without CWL) due to the fact that CWL brings additional weapon launch interface hardware that allows AN/BYG-1 to communicate with the weapon launchers and the weapons. The CWL hardware requires additional ship alterations, installation procedures, installation verification procedures, cabling, and manpower.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5				<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems						<b>Modification Number / Title:</b> 6 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/ CWL			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> [No Model Specified]				<b>Modification Type:</b> UPGRADE				<b>Related RDT&amp;E PEs:</b>					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/CWL													
B Kits													
Recurring													
1.1.1) EQUIPMENT - NonOrganic <sup>(7)</sup>	3 / 34.809	1 / 6.406	- / -	4 / 27.188	- / -	4 / 27.188	5 / 34.665	4 / 28.286	4 / 28.852	3 / 22.072	- / -	24 / 182.278	
<i>Subtotal: Recurring</i>	- / 34.809	- / 6.406	- / -	- / 27.188	- / -	- / 27.188	- / 34.665	- / 28.286	- / 28.852	- / 22.072	- / 0.000	- / 182.278	
<i>Subtotal: VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/CWL</i>	3 / 34.809	1 / 6.406	- / -	4 / 27.188	- / -	4 / 27.188	5 / 34.665	4 / 28.286	4 / 28.852	3 / 22.072	- / -	24 / 182.278	
<i>Subtotal: Procurement, All Modification Items</i>	- / 34.809	- / 6.406	- / -	- / 27.188	- / -	- / 27.188	- / 34.665	- / 28.286	- / 28.852	- / 22.072	- / 0.000	- / 182.278	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/CWL	- / 0.000	- / 8.664	- / 8.855	- / 0.000	- / 0.000	- / 0.000	- / 9.213	- / 23.492	- / 19.170	- / 19.554	- / 25.130	- / 114.078	
<i>Subtotal: Installation</i>	- / 0.000	- / 8.664	- / 8.855	- / -	- / -	- / -	- / 9.213	- / 23.492	- / 19.170	- / 19.554	- / 25.130	- / 114.078	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>34.809</b>	<b>15.070</b>	<b>8.855</b>	<b>27.188</b>	<b>0.000</b>	<b>27.188</b>	<b>43.878</b>	<b>51.778</b>	<b>48.022</b>	<b>41.626</b>	<b>25.130</b>	<b>296.356</b>	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5										<b>P-1 Line Item Number / Title:</b> 5420 / SSN Combat Control Systems										<b>Modification Number / Title:</b> 6 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/ CWL											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 1 of 1:</b> VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/CWL																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Various															Manufacturer Location: Various																
Administrative Leadtime <i>(in Months)</i> : 6															Production Leadtime <i>(in Months)</i> : 18																
<b>Dates</b>		<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>					
Contract Dates		Mar 2022								Jan 2024				Jan 2025				Jan 2026				Jan 2027				Jan 2028					
Delivery Dates		Mar 2023								Jul 2025				Jul 2026				Jul 2027				Jul 2028				Jul 2029					
<b>Installation Information</b>																															
<b>Method of Implementation:</b> AIT:: Installation Name: EQUIPMENT																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>		<b>FY 2025</b>		<b>FY 2026</b>		<b>FY 2027</b>		<b>FY 2028</b>		<b>To Complete</b>		<b>Total</b>							
		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>		Qty <i>(Each)</i> / Total Cost <i>(\$ M)</i>							
Prior Years		- / -		2 / 8.664		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		2 / 8.664							
FY 2022		- / -		- / -		2 / 8.855		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		2 / 8.855							
FY 2023		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		2 / 9.213		2 / 9.397		- / -		- / -		0 / 0.000		4 / 18.610							
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		3 / 14.095		2 / 9.585		- / -		0 / 0.000		5 / 23.680							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		2 / 9.585		2 / 9.777		0 / 0.000		4 / 19.362							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		2 / 9.777		2 / 9.972		4 / 19.749							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		3 / 15.158		3 / 15.158							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		- / -		2 / 8.664		2 / 8.855		- / -		- / -		- / -		2 / 9.213		5 / 23.492		4 / 19.170		4 / 19.554		5 / 25.130		24 / 114.078							
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	-	-	2	-	-	-	1	1	-	-	-	-	-	-	-	-	2	2	-	-	3	2	-	-	2	2	-	-	2	5	24
Out	-	-	-	2	-	-	-	1	1	-	-	-	-	-	-	-	2	2	-	-	3	2	-	-	2	2	-	-	2	5	24
<b>Footnotes:</b>																															
<sup>(7)</sup> Supply chain delays have increased from between 6 and 12 months to as much as 18 months. As a result, shipset deliveries starting in FY25 are now received in Q4 or later of a given fiscal year instead of what has in prior fiscal years been Q2 or later. Once delivered, these shipsets are sent to platforms in the same quarter instead of what has been done in the past prior to the supply chain delays. In order to																															

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Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5	P-1 Line Item Number / Title: 5420 / SSN Combat Control Systems	Modification Number / Title: 6 / VB034 UPGRADES FROM TI04 AND OUT BASELINE SSN774 CLASS W/ CWL
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>maintain installation schedules, the Navy has created efficiencies to reduce the time between delivery of shipsets ("In") and installation of shipsets ("Out") to occur in the same quarter. Note: While two shipsets procured in FY24 will be installed in FY26, those shipsets cannot be procured in FY25 due to their early-FY26 need dates combined with the 18-month shipset lead time.</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 5: ASW Support Equipment							<b>P-1 Line Item Number / Title:</b> 5429 / ASW Support Equipment					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> N/A					
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	156.655	26.852	35.720	27.469	0.000	27.469	25.456	25.974	26.494	27.024	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	156.655	26.852	35.720	27.469	0.000	27.469	25.456	25.974	26.494	27.024	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>156.655</b>	<b>26.852</b>	<b>35.720</b>	<b>27.469</b>	<b>0.000</b>	<b>27.469</b>	<b>25.456</b>	<b>25.974</b>	<b>26.494</b>	<b>27.024</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<p><b>Description:</b></p> <p>This Budget Line Item (BLI) consists of three separate and distinct programs, the Submarine Weapons Launching and Handling Support Equipment program, the Surface ASW Support Equipment program, and the ASW Range Support Equipment program.</p> <p>SUBMARINE WEAPONS LAUNCHING AND HANDLING SUPPORT EQUIPMENT (Cost Codes VC000/VC830/VC5IN): Funding for modifications and improvements to SSN 688, SSBN 726 and SSN 21 classes Attack and Ballistic Missile Submarine weapons launching, stowage and shipping systems, torpedo tube system components and torpedo tube test equipment. These requirements arise as a result of the introduction of new or modified weapons, devices, and sensors and their subsequent evaluation test and operational use. Also procured are reliability, maintainability, functional and safety modifications and tactical improvements resulting from operational use experience. This funding also provides management services required for installations.</p> <p>SURFACE ASW SUPPORT EQUIPMENT (Cost Codes VC008/VC009/VC900/VC6IN/VC010): Primarily funds the procurement and fielding of safety modifications through the Ordnance Alteration (ORDALT) process to Anti-Submarine Warfare (ASW) Fire Control, Surface Vessel Torpedo Tube (SVTT), and related ASW Fire Control/SVTT support and test equipment to maintain the current performance envelope. Modification requirements arise based on Reliability, Maintainability and Availability (RM&amp;A) metrics and as a result of evaluation, testing, and Fleet use of existing, new, or modified ASW weapons and/or related systems and subsystems. Included in this line item are all related procurements for training and simulation equipment required for the continued operation of this equipment. ORDALT procurements are highly variable and dependent on shipboard configurations and equipment age. Additionally, the Surface ASW Support Equipment program, as shown in the Cost Code VC010 'AN/UQN-10 Sonar Sounding Set Fathometer' P-3a Exhibit, is responsible for the fielding of the next generation AN/UQN-10 Sonar Sounding Set Fathometer as a Commercial-Off-The-Shelf (COTS) retrofit/replacement of legacy AN/UQN-4/4A systems on Destroyer (DDG51 Class), Aircraft Carrier (CVN Class), and Amphibious (LHA, LHD, LPD, LSD, LCC) platforms. This program will also finance the non-recurring engineering (NRE) required to convert the non-program of record fathometers and transducers employed on Littoral Combat Ship (LCS) and DDG1000 platforms to the common program of record AN/UQN-10 Sonar Sounding Set Fathometer and TR-355 transducer. Retrofit of legacy AN/UQN-4/4A systems is required to increase RM&amp;A metrics, increase overall Sonar Sounding Set Fathometer system Operational Availability (Ao), eliminate obsolescence issues and reduce supportability costs. AN/UQN-10 Sonar Sounding Set Fathometer replacement/retrofit efforts include the establishment of Integrated Logistics Support (ILS) elements and engineering test procedures, qualification and acceptance testing, procurement, and installation of systems via Alteration Installation Team (AIT). The AN/UQN-10 provides a means of measuring the depth of water below the ship's keel to the ocean bottom. The AN/UQN-10 performs depth sounding functions, while providing visual depth indication and recording capabilities, for measured water depths to a maximum depth of more than 7000 meters. Real-time depth information is displayed in digital readout and graphic display formats with internal depth data logging capability available for playback and use in reconstruction efforts. The AN/UQN-10 is a drop-in replacement of the legacy AN/UQN-4/4A system, designed specifically to communicate with the same shipboard system interfaces and to utilize the same TR-355 series transducer as the legacy AN/UQN-4/4A. The AN/UQN-10 employs touch screen control, new digital remote depth indicators, and a new EchoSim signal simulator.</p>												

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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 04: Ordnance Support Equipment / BSA 5: ASW Support Equipment		P-1 Line Item Number / Title: 5429 / ASW 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		
<p>NOTE: The SURFACE ASW SUPPORT EQUIPMENT SVTT-MK32 ORDALTs Cost Code VC009/Item Number 2.1 FY 2023 (\$1.557M) to FY 2024 (\$4.525M) increase (\$+2.968M) represents the additional funding required in FY 2024 to commence the upgrade of a major subsystem of the SVTT, the MK 432 Test Set Torpedo Presetter (TSTP). The MK 432 TSTP provides the Fleet the capability to simulate presetting, mode, and launch verification by emulating all surface lightweight torpedo types, and is also employed as an enhanced troubleshooting tool during launcher, Undersea Warfare (USW) Fire Control, and system casualty events. Due to obsolescence issues with the MK 432 TSTP, including display, mechanical steppers, and insufficient Random Access Memory (RAM) for presets, and as driven by enhanced Digital Fire Control Interface (eDFCI) requirements associated with AN/SQQ-89A(V)15 Surface ASW Combat System Advanced Capability Build (ACB)-21 and follow production baselines to ensure continued interoperability between the two systems, the MK 432 TSTP will require a significant Ordnance Alteration (ORDALT) effort. Goals of the redesigned MK 432 TSTP equipment include upgrade of the microcontroller to have sufficient RAM for eDFCI presets, emulation of Mk 54 Mod 0/1/2 torpedoes, utilization of current Mk 54 circuitry for analog emulation instead of mechanical steppers, migration away from assembly language, and emulation of Recoverable Exercise Torpedoes (REXTORPs) and Exercise Torpedoes (EXTORPs).</p>		
<p>ASW RANGE SUPPORT EQUIPMENT (Cost Codes VC001/VC002/VC003/VC004/VC005/VC831/VC832/VC851/VC970): ASW range support equipment 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) and Fast Attack Craft Target (FACT). Towed surface targets include the Low Cost Modular Target (LCMT) and Polyethylene Tow Target (PETT). Funding is also for the procurement of underwater tracking and shore equipment, Test and Evaluation (T&amp;E), acoustic trial range equipment, and weapon system and test equipment. Equipment procured includes instrumentation for U.S. Fleet Operational Readiness Accuracy Check Sites (FORACS) Program, equipment required to conduct fleet exercises at fixed and portable ranges for the Underwater Tracking Range Equipment (UTRE)/Pinger Program, and equipment for the Surface Ship Radiated Noise Measurement (SSRNM) Program. Training and T&amp;E ranges include; Southern California Offshore Range (SCORE), Barking Sands Tactical Underwater Range/Barking Sands Underwater Range Extension (BARSTUR/BSURE), Atlantic Underwater Test and Evaluation Center (AUTEC), Pacific Northwest Range Complex (Dabob/Nanoose ranges operated by Naval Undersea Warfare Center Division Keyport, Washington). UTRE ranges include Portable Offshore Training Range (POTR) and Portable Undersea Training Range (PUTR). FORACS ranges include; AUTEC, San Clemente Island, California, and deployed portable testing. Funding lines associated with replenishment spares N96 JCR6C ASW Support Equipment - SSRNM (J5429) for the FORACS and SSRNM programs and N94 JCR6C ASW Support Equipment (J5429) for the UTRE program. Funding also provides for Secure Autonomous Data Link for Undersea Warfare (USW) Portable (SADL-UP) in FY23.</p>		
<p>See the following for a description of all P-40a and P-3a cost items that comprise this budget:</p>		
<p>[P40A / VC000 - SUB WEAPONS LAUNCH/HANDLING SUPPORT]: VC000 - SUB WEAPONS LAUNCH/HANDLING SUPPORT</p> <p>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), and Weapons Stowage and Handling Systems (WSHS). Development efforts under this item number include Engineering Change Proposals (ECP), ORDALTs, Type Zero (TZ) kits and Test Equipment and alteration material procurement to correct significant deficiencies in equipment affecting personnel safety, ship safety and system performance.</p>		
<p>[P40A / VC830 - PRODUCTION ENGINEERING]: VC830 - PRODUCTION ENGINEERING</p> <p>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.</p>		
<p>[P40A / VC5IN O/A INSTALLATION]: VC5IN O/A 18000 INSTALL</p> <p>Installing agents will be various Naval Shipyards and contractors. Contracted installations require funding for management of installations during the availabilities. All installations will be on SSBN and SSN688/21 Class Submarines.</p>		
<p>[P40A - 2 / SURFACE ASW SUPPORT EQUIPMENT]: Cost Codes VC008/VC009/VC900/VC6IN/VC010:</p>		
<p>[P40A - 2 / VC008 - ASWCS FIRE CONTROL ORDALTs]: VC008 Cost Elements/Descriptions as follows:</p>		
<p>ASWCS - UCFS/FIRE CONTROL ORDALTs Item Number 1.1: Provides funding for ORDALT kits for the ASW Underwater Control Functional Segment (UCFS), ASW Control System (ASWCS) MK116 Mod 7, Torpedo Setting Panel (MK331), and the Torpedo Pre-Setter Test Set (MK432). ORDALT procurements include a MK432 Mod 6 test set which provides for the addition of wide angle display, cable terminations and tech refresh of obsolete motherboard parts. Also provides material support at multiple land-based laboratories as well as material support for upgrades and calibrations. Procurements will ensure laboratories are at Fleet baseline configurations.</p>		

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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 04: Ordnance Support Equipment / BSA 5: ASW Support Equipment		P-1 Line Item Number / Title: 5429 / ASW 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		
<p>ASWCS - PRODUCTION ENGINEERING SUPPORT Item Number 1.2: Provides the necessary production engineering support funds to cover the associated Integrated Logistics Support (ILS) elements, Engineering Change Proposal (ECP) reviews, Engineering Changes (EC), Ship Change Documents (SCDs), and engineering audits for ASW Fire Control. Reviews and approves internal and external system interfaces (hardware and integration related) and identify interface issues.</p> <p>ASWCS - ACCEPTANCE TEST &amp; EVALUATION Item Number 1.3: Provides the in-house acceptance test and evaluation funding associated with the safety and quality assurance testing of all ASW Fire Control, Alteration Equivalent to Repairs (AERs), ECPs, ECs, and SCDs.</p> <p>[P40A - 2 / VC009 - TORPEDO TUBE ORDALTS]: VC009 Cost Elements/Descriptions as follows:</p> <p>SVTT - MK32 ORDALTS Item Number 2.1: The SVTT MK32 is an over-the-side torpedo defense surface ship launched system that conducts close-in ASW operations. This line provides funding for SVTT MK32 launchers, Torpedo Loading Trays (TLTs), and ancillary equipment for testing, training, and maintainability on select surface ship combatants. ORDALT procurements include: Emergency Fire Circuit and Mount to Magazine Door Interoperability Circuit Improvements (SVTT MK32 Mod 19 only - ORDALT 76463); Overheat Sensor Test Set (SVTT MK32 Mod 15 Only - ORDALT 91074); Torpedo MK54 SVTT Upgrades (SVTT MK32 Mods 14 Only - ORDALT 76008); Breech Mechanism Control Valve Redesign (SVTT MK32 All Mods - ORDALT ECP 2061 in Process); Over-Heat Sensor Assembly Modification (SVTT MK32 Mod 15 Only - ORDALT 412-05-015); Training Gear Handcrank Support Improvements (SVTT MK32 Mods 15 Only - ORDALT ECP 2060 in Process), and Air Charging Panel Enclosure Redesign (SVTT MK32 MOD 15 Only - ORDALT TBD). Procure SVTT shoresite laboratory equipment for Launcher System Facilities (LSF). LSFs are used to simulate shipboard conditions for over-the-side torpedo launchers, as well as for the creation of the required ORDALTS.</p> <p>NOTE: The FY 2023 (\$1.557M) to FY 2024 (\$4.525M) increase (\$+2.968M) represents the additional funding required in FY 2024 to commence the upgrade of a major subsystem of the SVTT, the MK 432 Test Set Torpedo Presetter (TSTP). The MK 432 TSTP provides the Fleet the capability to simulate presetting, mode, and launch verification by emulating all surface lightweight torpedo types, and is also employed as an enhanced troubleshooting tool during launcher, Undersea Warfare (USW) Fire Control, and system casualty events. Due to obsolescence issues with the MK 432 TSTP, including display, mechanical steppers, and insufficient Random Access Memory (RAM) for presets, and as driven by enhanced Digital Fire Control Interface (eDFCI) requirements associated with AN/SQQ-89A(V)15 Surface ASW Combat System Advanced Capability Build (ACB)-21 and follow production baselines to ensure continued interoperability between the two systems, the MK 432 TSTP will require a significant Ordnance Alteration (ORDALT) effort. Goals of the redesigned MK 432 TSTP equipment include upgrade of the microcontroller to have sufficient RAM for eDFCI presets, emulation of Mk 54 Mod 0/1/2 torpedoes, utilization of current Mk 54 circuitry for analog emulation instead of mechanical steppers, migration away from assembly language, and emulation of Recoverable Exercise Torpedoes (REXTORPs) and Exercise Torpedoes (EXTORPs).</p> <p>SVTT - PRODUCTION ENGINEERING Item Number 2.2: Provides the necessary production engineering support funds to cover the associated Integrated Logistics Support (ILS) elements, Engineering Change Proposal (ECP) reviews, Engineering Changes (EC), SCDs, and engineering audits for SVTT ORDALTS.</p> <p>SVTT - ACCEPTANCE TEST &amp; EVALUATION Item Number 2.3: Provides the in-house acceptance test and evaluation funding required for the safety and quality assurance testing of all SVTT ORDALTS, Alteration Equivalent to Repairs (AERs), ECPs, ECs, and SCDs.</p> <p>[P40A - 2 / VC900 - CONSULTING SERVICES]: VC900 Cost Element/Description as Follows:</p> <p>Item 3.1: Provides the necessary funding for consulting services required to support scheduling of ASW Fire Control and SVTT ORDALT production, test, and installation efforts in conjunction with operation, safety, and environmental requirements.</p> <p>[P40A - 2 / VC6IN - INSTALLATION OF EQUIPMENT]: VC6IN Cost Element/Description as follows:</p> <p>Item Numbers 4.1 &amp; 4.2: Funds the installation of all ASW UCFS/Fire Control ORDALTS/SCDs (under Cost Code VC008) and SVTT ORDALTS/SCDs (under Cost Code VC009). Alteration Installation Team (AIT) pier-side installations are variable and contingent on Type Commander (TYCOM), Ships' Scheduling Conference (SSC), and ships' availability.</p>		

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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 04: Ordnance Support Equipment / BSA 5: ASW Support Equipment		P-1 Line Item Number / Title: 5429 / ASW 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		
<p>[P40A - 3 / ASW RANGE SUPPORT EQUIPMENT]: ANTI-SUBMARINE WARFARE (ASW) RANGE SUPPORT EQUIPMENT:</p> <p>Funding for 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) and Fast Attack Craft Target (FACT). Towed surface targets include the Low Cost Modular Target (LCMT) and Polyethylene Tow Target (PETT). (Targets)</p> <p>Funding also provides Surface Ship Radiated Noise Measurement (SSRNM) &amp; US Fleet Operational Readiness Accuracy Check Sites (FORACS) test and evaluation capability for surface ships and submarines; Underwater Tracking Range Equipment (UTRE)/Pinger Program provides tracking equipment for systems, platforms, torpedoes and targets on all Navy Underwater Tracking Ranges, including portable tracking systems supporting test and training events. Funding also provides for Secure Autonomous Data Link for Undersea Warfare (USW) Portable (SADL-UP) in FY23. (S05)</p> <p>[P40A - 3 / VC001 - Surface Ship Radiated Noise Measurement (SSRNM)/US Fleet Operational Readiness Accuracy Check Sites (FORACS) - N96]: Funding provides for the procurement of range communication systems, ship auto-tracking system, Surface Ship Acoustic Range Equipment, and upgraded ship position tracking system for the Surface Ship Radiated Noise Measurement (SSRNM) and US Fleet Operational Readiness Accuracy Check Sites (FORACS) programs. Funding also provides for improvements, modernizations, and upgrades to systems and equipment. (S05)</p> <p>[P40A - 3 / VC002 - UNDERWATER TRACKING RANGE EQUIPMENT (UTRE)/Pinger - N94]: Funding provides for the Underwater Tracking Range Equipment (UTRE)/Pinger program for the procurement of underwater tracking equipment for fixed and portable tracking systems, both CONUS and OCONUS, shop special Pinger purpose test equipment, and the associated ancillary hardware required to track ships and submarines during Fleet training exercises. Funding provides tracking equipment for systems, platforms, torpedoes and targets on all Navy Underwater Tracking Ranges, including portable tracking systems supporting test and training events for Forward Deployed Naval Forces (FDNF). Funding also provides for improvements, modernizations, and upgrades to systems and equipment. Funding also provides for Secure Autonomous Data Link for Undersea Warfare (USW) Portable (SADL-UP). (S05)</p> <p>[P40A - 3 / VC003 - TOWED TARGETS]: The Fleet requires low cost expendable towed targets for weapon system T&amp;E and Fleet training. The Low Cost Modular Target (LCMT) and the Polyethylene Tow Target (PETT) are the primary towed targets used to meet these requirements.</p> <p>[P40A - 3 / VC004 - INSTRUMENTATION]: Seaborne target augmentation systems include transponders (i.e. transmitters/receivers), radar reflectors, Radio Frequency (RF) emitters and Ground Support Equipment (GSE). Various electronic components provide the interface for the target control systems with the control stations/facilities for drone operations. RF emitters and radar reflectors enhance target threat replication and provide the required stimulus for anti-surface/radar weapons systems.</p> <p>[P40A - 3 / VC005 - HSMST (HIGH SPEED MANEUVERABLE SURFACE TARGET)]: 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.</p> <p>[P40A - 3 / VC831/2 - PRODUCTION ENGINEERING]: Funding provides for Production Engineering performed by a field activity or contractor during the production phase of these projects. (S05) &amp; (Ships)</p> <p>[P40A - 3 / VC851 - PRODUCT IMPROVEMENT]: Funding provides for Product Improvement performed by a field activity or contractor during the production phase of these projects. (S05)</p> <p>[P40A - 3 / VC970 - INTEGRATED LOGISTICS SUPPORT]: Funding provides for logistics spares and repair parts.</p> <p>[P3A / VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER]: The Surface ASW Support Equipment program, as shown in the Cost Code VC010 'AN/UQN-10 Sonar Sounding Set Fathometer' P-3a Exhibit, is responsible for the fielding of the next generation AN/UQN-10 Sonar Sounding Set Fathometer as a Commercial-Off-The-Shelf (COTS) retrofit/replacement of legacy AN/UQN-4/4A systems on Destroyer (DDG51 Class), Aircraft Carrier (CVN Class), and Amphibious (LHA, LHD, LPD, LSD, LCC) platforms. This program will also finance the non-recurring engineering (NRE) required to convert the non-program of record fathometers and transducers employed on Littoral Combat Ship (LCS) and DDG1000 platforms to the common program of record AN/UQN-10 Sonar Sounding Set Fathometer and TR-355 transducer. Retrofit of legacy AN/UQN-4/4A systems is required to increase RM&amp;A metrics, increase overall Sonar Sounding Set Fathometer system Operational Availability (Ao), eliminate obsolescence issues and reduce supportability costs. AN/UQN-10 Sonar Sounding Set Fathometer replacement/retrofit efforts include the establishment of Integrated Logistics Support (ILS) elements and engineering test</p>		

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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 04: Ordnance Support Equipment / BSA 5: ASW Support Equipment		P-1 Line Item Number / Title: 5429 / ASW 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		
<p>procedures, qualification and acceptance testing, procurement, and installation of systems via Alteration Installation Team (AIT). The AN/UQN-10 provides a means of measuring the depth of water below the ships keel to the ocean bottom. The AN/UQN-10 performs depth sounding functions, while providing visual depth indication and recording capabilities, for measured water depths to a maximum depth of more than 7000 meters. Real-time depth information is displayed in digital readout and graphic display formats with internal depth data logging capability available for playback and use in reconstruction efforts. The AN/UQN-10 is a drop-in replacement of the legacy AN/UQN-4/4A system, designed specifically to communicate with the same shipboard system interfaces and to utilize the same TR-355 series transducer as the legacy AN/UQN-4/4A. The AN/UQN-10 employs touch screen control, new digital remote depth indicators, and a new EchoSim signal simulator.</p>		

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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 04: Ordnance Support Equipment / BSA 5: ASW Support Equipment					P-1 Line Item Number / Title: 5429 / ASW 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	SUB WEAPONS LAUNCHING/HANDLING SUPPORT EQUIPMENT				- / 20.303	- / -	- / -	- / -	- / -	- / -	
P-40a	SURFACE ASW SUPPORT EQUIPMENT				- / 25.869	- / 3.892	- / 4.008	- / 7.024	- / -	- / 7.024	
P-40a	ASW RANGE SUPPORT EQUIPMENT	P-5a			- / 106.983	- / 20.360	- / 26.212	- / 17.079	- / -	- / 17.079	
P-3a	1 / VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER (Warfighting Capability)				- / 3.500	- / 2.600	- / 5.500	- / 3.366	- / 0.000	- / 3.366	
P-40	Total Gross/Weapon System Cost				- / 156.655	- / 26.852	- / 35.720	- / 27.469	- / 0.000	- / 27.469	
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	SUB WEAPONS LAUNCHING/HANDLING SUPPORT EQUIPMENT				- / -	- / -	- / -	- / -	- / -	- / -	
P-40a	SURFACE ASW SUPPORT EQUIPMENT				- / -	- / -	- / -	- / -	- / -	- / -	
P-40a	ASW RANGE SUPPORT EQUIPMENT	P-5a			- / -	- / -	- / -	- / -	- / -	- / -	
P-3a	1 / VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER (Warfighting Capability)				- / 1.603	- / 1.631	- / 0.714	- / 0.000	- / 0.000	- / 18.914	
P-40	Total Gross/Weapon System Cost				- / 25.456	- / 25.974	- / 26.494	- / 27.024	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:**

Received an \$8.8M Congressional add in FY23 for Secure Autonomous Data Link for Undersea Warfare (USW) Portable Ranges (SADL-UP) to procure wave gliders and associated equipment for Western Pacific Fleet (WESTPAC) Forward Deployed Naval Forces (FDNF).



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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy																Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5						P-1 Line Item Number / Title: 5429 / ASW Support Equipment										Aggregated Items Title: SUB WEAPONS LAUNCHING/ HANDLING SUPPORT EQUIPMENT <sup>(1)</sup>					
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) VC000 - SUB WEAPONS LAUNCH/HANDLING SUPPORT																					
1.1) 2J COG MATERIAL	A		-	-	0.678	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.2) TT/TEP/ICL/ WSHS	A		-	-	6.284	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 1) VC000 - SUB WEAPONS LAUNCH/HANDLING SUPPORT			-	-	6.962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2) VC000 ORDALT PROCUREMENT																					
2.1) O/A MATERIAL	A		50,000.00	26	1.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 2) VC000 ORDALT PROCUREMENT			-	-	1.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3) VC000 - TEST EQUIPMENT																					
3.1) BORE GAGE	A		-	-	0.131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3.2) MISC. TEST EQUIPMENT	A		-	-	0.573	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3.3) TEST FACILITY EQUIPMENT	A		-	-	0.637	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 3) VC000 - TEST EQUIPMENT			-	-	1.341	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4) VC830 - PRODUCTION ENGINEERING																					
4.1) PRODUCTION ENGINEERING	A		-	-	1.200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 4) VC830 - PRODUCTION ENGINEERING			-	-	1.200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5) VC5IN - ORDALT INSTALLATION																					
5.1) VC5IN O/A INSTALLATION	A		-	-	9.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 5) VC5IN - ORDALT INSTALLATION			-	-	9.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total			-	-	20.303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																					
Footnotes:																					
<sup>(1)</sup> This line item procures modifications and improvements to Attack and Ballistic Missile Submarine fire control interface systems, torpedo tube system components and torpedo tube test equipment. These requirements arise as a result of the introduction of new or modified weapons and sensors and their subsequent evaluation test and operational use. Also procured are reliability, maintainability, functional and safety modifications and tactical improvements resulting from operational use experience.																					

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5								P-1 Line Item Number / Title: 5429 / ASW Support Equipment							Aggregated Items Title: SURFACE ASW 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) VC008 - ASWCS FIRE CONTROL ORDALTS																				
1.1) ASWCS - UCFS/ FIRE CONTROL ORDALTS			-	-	11.804	-	-	1.775	-	-	1.811	-	-	1.847	-	-	-	-	-	1.847
1.2) ASWCS - PRODUCTION ENGINEERING SUPPORT			-	-	0.635	-	-	0.099	-	-	0.101	-	-	0.103	-	-	-	-	-	0.103
1.3) ASWCS - ACCEPTANCE TEST & EVALUATION			-	-	0.360	-	-	0.055	-	-	0.056	-	-	0.057	-	-	-	-	-	0.057
Subtotal: 1) VC008 - ASWCS FIRE CONTROL ORDALTS			-	-	12.799	-	-	1.929	-	-	1.968	-	-	2.007	-	-	-	-	-	2.007
2) VC009 - TORPEDO TUBE ORDALTS																				
2.1) SVTT - MK32 ORDALTS (2)			-	-	9.917	-	-	1.490	-	-	1.557	-	-	4.525	-	-	-	-	-	4.525
2.2) SVTT - PRODUCTION ENGINEERING SUPPORT			-	-	0.631	-	-	0.099	-	-	0.101	-	-	0.103	-	-	-	-	-	0.103
2.3) SVTT - ACCEPTANCE TEST & EVALUATION			-	-	0.360	-	-	0.055	-	-	0.056	-	-	0.057	-	-	-	-	-	0.057
Subtotal: 2) VC009 - TORPEDO TUBE ORDALTS			-	-	10.908	-	-	1.644	-	-	1.714	-	-	4.685	-	-	-	-	-	4.685
3) VC900 - CONSULTING SERVICES																				
3.1) CONSULTING SERVICES			-	-	0.675	-	-	0.096	-	-	0.098	-	-	0.100	-	-	-	-	-	0.100
Subtotal: 3) VC900 - CONSULTING SERVICES			-	-	0.675	-	-	0.096	-	-	0.098	-	-	0.100	-	-	-	-	-	0.100
4) VC61N - INSTALLATION OF EQUIPMENT																				
4.1) ASWCS - UCFS/ FIRE CONTROL ORDALTS			-	-	0.757	-	-	0.112	-	-	0.114	-	-	0.116	-	-	-	-	-	0.116
4.2) SVTT - TORPEDO TUBE ORDALTS			-	-	0.730	-	-	0.111	-	-	0.114	-	-	0.116	-	-	-	-	-	0.116
Subtotal: 4) VC61N - INSTALLATION OF EQUIPMENT			-	-	1.487	-	-	0.223	-	-	0.228	-	-	0.232	-	-	-	-	-	0.232
Total			-	-	25.869	-	-	3.892	-	-	4.008	-	-	7.024	-	-	-	-	-	7.024
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
Footnotes:																				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5	P-1 Line Item Number / Title: 5429 / ASW Support Equipment	Aggregated Items Title: SURFACE ASW SUPPORT EQUIPMENT

(2) Surface ASW Support Equipment - Item Number 2.1 - SVTT - MK32 ORDALTs: FY 2023 (\$1.557M) to FY 2024 (\$4.525M) increase (\$+2.968M) represents the additional funding required in FY 2024 to commence the upgrade of a major subsystem of the SVTT, the MK 432 Test Set Torpedo Presetter (TSTP). The MK 432 TSTP provides the Fleet the capability to simulate presetting, mode, and launch verification by emulating all surface lightweight torpedo types, and is also employed as an enhanced troubleshooting tool during launcher, Undersea Warfare (USW) Fire Control, and system casualty events. Due to obsolescence issues with the MK 432 TSTP, including display, mechanical steppers, and insufficient Random Access Memory (RAM) for presets, and as driven by enhanced Digital Fire Control Interface (eDFCI) requirements associated with AN/SQQ-89A(V)15 Surface ASW Combat System Advanced Capability Build (ACB)-21 and follow production baselines to ensure continued interoperability between the two systems, the MK 432 TSTP will require a significant Ordnance Alteration (ORDALT) effort. Goals of the redesigned MK 432 TSTP equipment include upgrade of the microcontroller to have sufficient RAM for eDFCI presets, emulation of Mk 54 Mod 0/1/2 torpedoes, utilization of current Mk 54 circuitry for analog emulation instead of mechanical steppers, migration away from assembly language, and emulation of Recoverable Exercise Torpedoes (REXTORPs) and Exercise Torpedoes (EXTORPs).

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5						P-1 Line Item Number / Title: 5429 / ASW Support Equipment									Aggregated Items Title: ASW RANGE 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) VC001 - Surface Ship Radiated Noise Measurement (SSRNM)/US Fleet Operational Readiness Acc																				
1.1) VC001 - SSRNM/US FORACS (S05)	A		-	-	17.689	-	-	2.980	-	-	3.090	-	-	3.126	-	-	-	-	-	3.126
Subtotal: 1) VC001 - Surface Ship Radiated Noise Measurement (SSRNM)/US Fleet Operational Readiness Acc			-	-	17.689	-	-	2.980	-	-	3.090	-	-	3.126	-	-	-	-	-	3.126
2) VC002 - UNDERWATER TRACKING RANGE EQUIPMENT (UTRE)/Pinger - N94																				
2.1) VC002 - UTRE (S05)	A		-	-	13.522	-	-	1.993	-	-	10.830	-	-	2.067	-	-	-	-	-	2.067
Subtotal: 2) VC002 - UNDERWATER TRACKING RANGE EQUIPMENT (UTRE)/Pinger - N94			-	-	13.522	-	-	1.993	-	-	10.830	-	-	2.067	-	-	-	-	-	2.067
3) VC003 - TOWED TARGETS																				
3.1) VC003 - TOWED TARGETS (SHIPS)	A		-	-	6.742	-	-	1.123	-	-	1.159	-	-	1.037	-	-	-	-	-	1.037
Subtotal: 3) VC003 - TOWED TARGETS			-	-	6.742	-	-	1.123	-	-	1.159	-	-	1.037	-	-	-	-	-	1.037
4) VC004 - INSTRUMENTATION																				
4.1) VC004 - INSTRUMENTATION (SHIPS)	A		-	-	1.139	-	-	0.184	-	-	0.188	-	-	0.194	-	-	-	-	-	0.194
Subtotal: 4) VC004 - INSTRUMENTATION			-	-	1.139	-	-	0.184	-	-	0.188	-	-	0.194	-	-	-	-	-	0.194
5) VC005 - HSMST (HIGH SPEED MANEUVERABLE SURFACE TARGET)																				
5.1) VC005 - HSMST (SHIPS) (3)(f)	A		194,111.84	304	59.010	213,166.00	60	12.790	217,712.00	44	9.579	220,952.38	42	9.280	-	-	-	220,952.38	42	9.280
Subtotal: 5) VC005 - HSMST (HIGH SPEED MANEUVERABLE SURFACE TARGET)			-	-	59.010	-	-	12.790	-	-	9.579	-	-	9.280	-	-	-	-	-	9.280
6) VC831/2 - PRODUCTION ENGINEERING																				
6.1) VC831 - PRODUCTION ENGINEERING UTRE - N94/US FORACS - N96 (S05)	A		-	-	2.338	-	-	0.315	-	-	0.348	-	-	0.348	-	-	-	-	-	0.348
6.2) VC832 - PRODUCTION ENGINEERING (Ships)	A		-	-	3.179	-	-	0.490	-	-	0.500	-	-	0.535	-	-	-	-	-	0.535
Subtotal: 6) VC831/2 - PRODUCTION ENGINEERING			-	-	5.517	-	-	0.805	-	-	0.848	-	-	0.883	-	-	-	-	-	0.883
7) VC851 - PRODUCT IMPROVEMENT																				
7.1) VC851 - PRODUCT	A		-	-	2.339	-	-	0.315	-	-	0.348	-	-	0.348	-	-	-	-	-	0.348

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5						P-1 Line Item Number / Title: 5429 / ASW Support Equipment						Aggregated Items Title: ASW RANGE 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)
IMPROVEMENT UTRE - N94/US FORACS-N96 (S05)																				
Subtotal: 7) VC851 - PRODUCT IMPROVEMENT			-	-	2.339	-	-	0.315	-	-	0.348	-	-	0.348	-	-	-	-	-	0.348
8) VC970 - INTEGRATED LOGISTICS SUPPORT																				
8.1) VC970 - INTEGRATED LOGISTICS SUPPORT (SHIPS)	A		-	-	1.025	-	-	0.170	-	-	0.170	-	-	0.144	-	-	-	-	-	0.144
Subtotal: 8) VC970 - INTEGRATED LOGISTICS SUPPORT			-	-	1.025	-	-	0.170	-	-	0.170	-	-	0.144	-	-	-	-	-	0.144
Total			-	-	106.983	-	-	20.360	-	-	26.212	-	-	17.079	-	-	-	-	-	17.079

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:**

(3) HSMSTs must be procured annually to (1) replace targets destroyed during testing/exercises, (2) replace targets which are beyond their service life and (3) provide a sufficient inventory of targets at the operating activities (Target Ranges). The Navy conducts approximately 3,000 seaborne target exercises each year. 1,500 seaborne target operations each year involve the HSMST and between 50 and 100 are destroyed annually. HSMSTs can be re-used if the target is not impacted or if the extent of the damage is minimal enough to allow the HSMST to be repaired.

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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy								Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5			P-1 Line Item Number / Title: 5429 / ASW Support Equipment					Aggregated Items: ASW RANGE 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 <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
5) VC005 - HSMST (HIGH SPEED MANEUVERABLE SURFACE TARGET)												
5.1) VC005 - HSMST (SHIPS) <sup>(3)</sup>		2022	Gravois Aluminum Boats / LA	C / FFP	NAVSEA	Dec 2022	May 2023	60	213,166.00	Y		Nov 2021
5.1) VC005 - HSMST (SHIPS) <sup>(3)</sup>		2023	Gravois Aluminum Boats / LA	C / FFP	NAVSEA	Mar 2023	May 2024	44	217,712.00	Y		Nov 2022
5.1) VC005 - HSMST (SHIPS) <sup>(3)</sup>		2024	TBD / TBD	C / FFP	NAVSEA	Mar 2024	Aug 2024	42	220,952.38	Y		Nov 2023

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5				<b>P-1 Line Item Number / Title:</b> 5429 / ASW Support Equipment						<b>Modification Number / Title:</b> 1 / VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :							<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3.500	2.600	5.500	3.366	0.000	3.366	1.603	1.631	0.714	0.000	0.000	18.914
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3.500	2.600	5.500	3.366	0.000	3.366	1.603	1.631	0.714	0.000	0.000	18.914
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>3.500</b>	<b>2.600</b>	<b>5.500</b>	<b>3.366</b>	<b>0.000</b>	<b>3.366</b>	<b>1.603</b>	<b>1.631</b>	<b>0.714</b>	<b>0.000</b>	<b>0.000</b>	<b>18.914</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<p><b>Description:</b></p> <p>The Surface ASW Support Equipment program, as shown in the Cost Code VC010 'AN/UQN-10 Sonar Sounding Set Fathometer' P-3a Exhibit here, is responsible for the fielding of the next generation AN/UQN-10 Sonar Sounding Set Fathometer as a Commercial-Off-The-Shelf (COTS) retrofit/replacement of legacy AN/UQN-4/4A systems on Destroyer (DDG51 Class), Aircraft Carrier (CVN Class), and Amphibious (LHA, LHD, LPD, LSD, LCC) platforms. This program will also finance the non-recurring engineering (NRE) required to convert the non-program of record fathometers and transducers employed on Littoral Combat Ship (LCS) and DDG1000 platforms to the common program of record AN/UQN-10 Sonar Sounding Set Fathometer and TR-355 transducer. Retrofit of legacy AN/UQN-4/4A systems is required to increase Reliability, Maintainability &amp; Availability (RM&amp;A) metrics, increase overall Sonar Sounding Set Fathometer system Operational Availability (Ao), eliminate obsolescence issues and reduce supportability costs. AN/UQN-10 Sonar Sounding Set Fathometer replacement/retrofit efforts include the establishment of Integrated Logistics Support (ILS) elements and engineering test procedures, qualification and acceptance testing, procurement, and installation of systems via Alteration Installation Team (AIT). The AN/UQN-10 provides a means of measuring the depth of water below the ships keel to the ocean bottom. The AN/UQN-10 performs depth sounding functions, while providing visual depth indication and recording capabilities, for measured water depths to a maximum depth of more than 7000 meters. Real-time depth information is displayed in digital readout and graphic display formats with internal depth data logging capability available for playback and use in reconstruction efforts. The AN/UQN-10 is a drop-in replacement of the legacy AN/UQN-4/4A system, designed specifically to communicate with the same shipboard system interfaces and to utilize the same TR-355 series transducer as the legacy AN/UQN-4/4A. The AN/UQN-10 employs touch screen control, new digital remote depth indicators, and a new EchoSim signal simulator.</p> <p>NOTE: The total AN/UQN-10 Sonar Sounding Set Fathometer retrofit requirement is 103 ships. All 103 systems were previously procured via a separate OPN Budget Line Item (BLI). 17 of those systems were previously installed via that same separate OPN BLI, leaving a balance of 86 systems to be installed via the OPN BLI 5429 Cost Code VC010 AN/UQN-10 Sonar Sounding Set Fathometer program represented here. For accounting purposes, these 86 systems are depicted within the 'Procurement' section of the OPN BLI 5429 VC010 P-3a in the Prior Years column with zero dollars shown.</p>												

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Exhibit P-3a, Individual Modification: PB 2024 Navy								Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 5				P-1 Line Item Number / Title: 5429 / ASW Support Equipment				Modification Number / Title: 1 / VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: Retrofit of legacy AN/ UQN-4/4A Sonar Sounding Set Fathometer systems with next generation AN/UQN-10				Modification Type: Warfighting Capability				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: VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER												
B Kits												
Recurring												
1.1.1) VC010 - AN/UQN-10 SOUNDING SET FATHOMETER - NonOrganic <sup>(4)</sup>	86 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	86 / 0.000
Subtotal: Recurring	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER	86 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	86 / 0.000
Subtotal: Procurement, All Modification Items	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
Modification Item 1 of 1: VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER	- / 3.500	- / 2.600	- / 5.500	- / 3.366	- / 0.000	- / 3.366	- / 1.603	- / 1.631	- / 0.714	- / 0.000	- / 0.000	- / 18.914
Subtotal: Installation	- / 3.500	- / 2.600	- / 5.500	- / 3.366	- / -	- / 3.366	- / 1.603	- / 1.631	- / 0.714	- / -	- / 0.000	- / 18.914
Total												
Total Cost (Procurement + Support + Installation)	3.500	2.600	5.500	3.366	0.000	3.366	1.603	1.631	0.714	0.000	0.000	18.914



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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 5										<b>P-1 Line Item Number / Title:</b> 5429 / ASW Support Equipment										<b>Modification Number / Title:</b> 1 / VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 1 of 1:</b> VC010 - AN/UQN-10 SONAR SOUNDING SET FATHOMETER																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Knudsen Systems, Inc.															Manufacturer Location: Ogdensburg, NY																
Administrative Leadtime (in Months): 0															Production Leadtime (in Months): 3																
<b>Dates</b>		<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>					
Contract Dates																															
Delivery Dates																															
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Alteration Installation Team (AIT):: Installation Name: VC010 - AN/UQN-10 SOUNDING SET FATHOMETER																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>		<b>FY 2025</b>		<b>FY 2026</b>		<b>FY 2027</b>		<b>FY 2028</b>		<b>To Complete</b>		<b>Total</b>							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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 / 3.500		12 / 2.600		25 / 5.500		15 / 3.366		0 / 0.000		15 / 3.366		7 / 1.603		7 / 1.631		3 / 0.714		- / -		0 / 0.000		86 / 18.914							
FY 2022		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2023		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		17 / 3.500		12 / 2.600		25 / 5.500		15 / 3.366		0 / 0.000		15 / 3.366		7 / 1.603		7 / 1.631		3 / 0.714		- / -		0 / 0.000		86 / 18.914							
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	17	2	3	4	3	5	6	7	7	3	5	4	3	1	3	2	1	1	2	2	2	-	2	1	-	-	-	-	-	-	86
Out	17	2	3	4	3	5	6	7	7	3	5	4	3	1	3	2	1	1	2	2	2	-	2	1	-	-	-	-	-	-	86
<b>Footnotes:</b> <sup>(4)</sup> NOTE: The total AN/UQN-10 Sonar Sounding Set Fathometer retrofit requirement is 103 ships. All 103 systems were previously procured via a separate OPN Budget Line Item (BLI). 17 of those systems were previously installed via that same separate OPN BLI, leaving a balance of 86 systems to be installed via the OPN BLI 5429 Cost Code VC010 AN/UQN-10 Sonar Sounding Set Fathometer program represented here. For accounting purposes, these 86 systems are depicted within the 'Procurement' section of the OPN BLI 5429 VC010 P-3a in the Prior Years column with zero dollars shown.																															

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 6: Other Ordnance Support Equipment							<b>P-1 Line Item Number / Title:</b> 5509 / EOD Equipment					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> 0603654N, 0604654N, 0604653N				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	856.537	1.721	14.336	27.864	0.000	27.864	9.105	7.290	4.011	4.172	-	925.036
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	856.537	1.721	14.336	27.864	0.000	27.864	9.105	7.290	4.011	4.172	-	925.036
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>856.537</b>	<b>1.721</b>	<b>14.336</b>	<b>27.864</b>	<b>0.000</b>	<b>27.864</b>	<b>9.105</b>	<b>7.290</b>	<b>4.011</b>	<b>4.172</b>	<b>-</b>	<b>925.036</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	0.424	-	0.424	-	-	-	-	-	0.424
Flyaway Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<p><b>Description:</b></p> <p>Explosive Ordnance Disposal (EOD) Equipment procures Navy EOD required tools and equipment developed to support a lethal, agile, and resilient force. In alignment with efforts to modernize in accordance with the National Defense Strategy, EOD Technicians require specialized tools to enable dynamic maneuver of Ships, Submarines, and Aircraft against near peer adversaries through the render safe and mitigation of explosive hazards on land and underwater. EOD Equipment supports 134 EOD Platoons both OCONUS and CONUS operations that allow the ability to detect, access, diagnose, render safe, exploit, and dispose of threats to National Security. Threat analysis and prosecution requires increased standoff distances from increasingly lethal, dynamic and advanced weapons system threats fielded by near peer adversaries.</p> <p>VN870: Procures Joint Counter Radio-Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW)/Counter Unmanned Aircraft (C-UAS) systems that disrupt enemy command and control radio frequency (RF) communications associated with IEDs and small-UAS. Additionally, in support of United States Fleet Forces (USFF), this program also supports the Navy effort to field CREW dismounted systems with a C-UAS capability. Funds also procure hardware upgrades for fielded systems required to maintain capability against the evolving advanced threat.</p> <p>VN075: EOD Robotics: Provides USN EOD Robotics outfitting for performing UXO and IED clearance operations in remote locations or forces directly supporting maneuver forces to provide access to battlespace and ensure freedom of navigation.</p> <p>VN077: NAVY EOD EQUIPMENT: Procurement provides the recapitalization and modernization of EOD equipment and will address Table of Allowance shortfalls.</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy							<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 6: Other Ordnance Support Equipment						<b>P-1 Line Item Number / Title:</b> 5509 / EOD Equipment				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0603654N, 0604654N, 0604653N				
<b>Line Item MDAP/MAIS Code:</b> 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 / EOD - CREW Equipment	P-5a, P-21			- / 856.537	- / 1.721	- / 14.336	- / 27.864	- / 0.000	- / 27.864
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 856.537</b>	<b>- / 1.721</b>	<b>- / 14.336</b>	<b>- / 27.864</b>	<b>- / 0.000</b>	<b>- / 27.864</b>
<p>*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.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b></p> <p>VN075 EOD Robotics - FY24 funding increase for EOD Robotics is attributed to the procurement of Medium Robotics systems (MTRS-II) and Large Robotics systems (CRS-H) to complete the inventory objectives of medium and large robots that are required for Navy EOD Forces. The procurement of the systems needs to happen under a condensed timeline due to contracting constraints that occur at the end of FY24. Without the contract, there is currently no fiscally responsible option to procure the capabilities. The funding increase will enable EOD Technicians to perform expeditionary (Medium) and base (Large) ordnance clearance remotely, removing the EOD technician from harm's way.</p> <p>VN077 Navy EOD Equipment - FY24 funding increase for Navy EOD Equipment supports the procurement of MF5 metal detector units and associated support equipment to meet Table of Allowance buy. The funding increase will complete the inventory objective for Navy EOD Forces. The MF5 enables EOD Technicians to locate ordnance of both the metal and non-metal variety, which enhances EOD Technicians ability to adapt to the growing complexity and list of IED/UXO ordnance materials being used.</p> <p>VN870 JOINT CREW &amp; CUAS/DRAKE- DRAKE funding realigned from LI 5231 to LI 5509 beginning in FY24. \$2.712M decrease in FY23 due to Congressional Enactment Mark to JCREW Technical Insertion/ Technical Refresh.</p>										

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Exhibit P-5, Cost Analysis: PB 2024 Navy													Date: March 2023								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6							P-1 Line Item Number / Title: 5509 / EOD Equipment						Item Number / Title [DODIC]: 1 / EOD - CREW 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		
Procurement Quantity <i>(Units in Each)</i>				-			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				856.537			1.721			14.336			27.864			0.000			27.864		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				856.537			1.721			14.336			27.864			0.000			27.864		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				856.537			1.721			14.336			27.864			0.000			27.864		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			0.424			-			0.424		
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>				-			-			-			-			-			-		
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 - VN075 - EOD EQUIPMENT/SYSTEM Cost																					
Recurring Cost																					
1.1.1) EOD ROBOTICS <sup>(†)</sup> (1)	168,174.19	155	26.067	-	-	-	150,000.00	16	2.400	179,310.52	81	14.524	-	-	-	179,310.52	81	14.524			
Subtotal: Recurring Cost	-	-	26.067	-	-	-	-	-	2.400	-	-	14.524	-	-	-	-	-	14.524			
Subtotal: Hardware - VN075 - EOD EQUIPMENT/ SYSTEM Cost	-	-	26.067	-	-	-	-	-	2.400	-	-	14.524	-	-	-	-	-	14.524			
Hardware - VN077 - EOD OUTFITTING Cost																					
Recurring Cost																					
2.1.1) EXPEDITIONARY EXPLOITATION UNIT (EXU-1) <sup>(2)</sup>	-	-	32.627	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2.1.2) MATERIAL FOR NAVSCOLEOD	-	-	4.473	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2.1.3) EOD DECISION SUPPORT SYSTEM CONTINUOUS IMPROVEMENTS	-	-	14.746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2.1.4) NAVY EOD EQUIPMENT <sup>(3)</sup>	-	-	53.366	-	-	0.890	-	-	0.999	-	-	4.059	-	-	-	-	-	4.059			
2.1.5) ROBOTICS EQUIPMENT <sup>(4)</sup>	-	-	2.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Subtotal: Recurring Cost	-	-	107.812	-	-	0.890	-	-	0.999	-	-	4.059	-	-	-	-	-	4.059			

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Exhibit P-5, Cost Analysis: PB 2024 Navy													Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6							P-1 Line Item Number / Title: 5509 / EOD Equipment						Item Number / Title [DODIC]: 1 / EOD - CREW Equipment					
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 - VN077 - EOD OUTFITTING Cost	-	-	107.812	-	-	0.890	-	-	0.999	-	-	4.059	-	-	-	-	-	4.059
Hardware - VN870 - JOINT CREW & CUAS/DRAKE Cost																		
Non Recurring Cost																		
3.1.1) JOINT CREW <sup>(†)</sup> <sub>(5)</sub>	155,571.43	637	99.099	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1.2) TECH INSERTION and REFRESH <sup>(†)</sup> <sub>(6)</sub>	-	-	4.153	-	-	0.831	72,651.79	112	8.137	74,276.60	47	3.491	-	-	-	74,276.60	47	3.491
3.1.4) JCREW COUNTER UNMANNED AIRCRAFT SYSTEMS (CUAS) <sup>(†)</sup> <sub>(7)</sub>	492,400.00	125	61.550	-	-	-	100,000.00	28	2.800	-	-	-	-	-	-	-	-	-
3.1.5) DRAKE SYSTEMS/TECH INSERTION UNDERSEA ENTERPRISE <sup>(8)</sup>	-	-	-	-	-	-	-	-	-	81,500.00	40	3.260	-	-	-	81,500.00	40	3.260
3.1.6) DRAKE SYSTEMS/TECH INSERTION AIR ENTERPRISE <sup>(9)</sup>	-	-	-	-	-	-	-	-	-	57,500.00	44	2.530	-	-	-	57,500.00	44	2.530
3.1.7) NSW COUNTER UNMANNED AERIAL SYSTEM (CUAS) <sup>(10)</sup>	-	-	1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	166.402	-	-	0.831	-	-	10.937	-	-	9.281	-	-	-	-	-	9.281
Subtotal: Hardware - VN870 - JOINT CREW & CUAS/ DRAKE Cost	-	-	166.402	-	-	0.831	-	-	10.937	-	-	9.281	-	-	-	-	-	9.281
Support - VN830 - PRODUCTION ENGINEERING Cost																		
4.1) PRODUCTION ENGINEERING	-	-	14.668	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - VN830 - PRODUCTION ENGINEERING Cost	-	-	14.668	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - VN850 - PRODUCT IMPROVEMENT Cost																		
5.1) PRODUCT IMPROVEMENT	-	-	9.991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2024 Navy													Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6						P-1 Line Item Number / Title: 5509 / EOD Equipment							Item Number / Title [DODIC]: 1 / EOD - CREW Equipment					
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: Support - VN850 - PRODUCT IMPROVEMENT Cost	-	-	9.991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - VN860 - ACCEPTANCE, TEST & EVALUATION Cost																		
6.1) JOINT EOD ACCEPTANCE TEST & EVALUATION	-	-	9.438	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.2) JOINT CREW ACCEPTANCE TEST & EVALUATION	-	-	3.104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - VN860 - ACCEPTANCE, TEST & EVALUATION Cost	-	-	12.542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - VNTNG - INITIAL TRAINING Cost																		
7.1) VNTNG - INITIAL TRAINING	-	-	4.096	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - VNTNG - INITIAL TRAINING Cost	-	-	4.096	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - PRIOR YEARS CUMULATIVE FUNDING Cost																		
8.1) PRIOR YEAR FUNDING	-	-	514.959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - PRIOR YEARS CUMULATIVE FUNDING Cost	-	-	514.959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	856.537	-	-	1.721	-	-	14.336	-	-	27.864	-	-	0.000	-	-	27.864

(t) indicates the presence of a P-5a

**Footnotes:**

- (1) The increase in unit price from FY23 to FY24 is accredited to the higher per unit cost of the CRS-H Large Robots combined with the unit cost of the MTRS II Medium Robots.
- (2) EXPEDITIONARY EXPLOITATION UNIT (EXU-1): Provides for outfitting of EXU-1 Detachment approved Table of Allowance to address operational requirements for ordnance and IED exploitation in support of global tasking. Enables rapid attribution intelligence against asymmetric and near peer threats to shape geo-political responses.
- (3) NAVY EOD EQUIPMENT: Procurement provides the recapitalization and modernization of EOD equipment in support of approved Buy Plan.
- (4) EOD Robotics Equipment: Provides United States Navy EOD outfitting operational systems for performing operations in remote locations or when Explosive Ordnance Disposal (EOD) forces are directly supporting maneuver forces in the anticipation of an incident.
- (5) JOINT CREW Provides for the procurement, support, and other related costs of the Joint Counter Radio Controlled Improvised Explosive Device - Electronic Warfare (JCREW) program and related family of systems that provide countermeasures against the global Radio Controlled IED (RCIED) threat.

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Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6	P-1 Line Item Number / Title: 5509 / EOD Equipment	Item Number / Title [DODIC]: 1 / EOD - CREW Equipment
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>(6) Joint TECH INSERTION and REFRESH: provides funding for the procurement of NextGen Software Defined Radio retrofit kits to be installed in fielded JCREW I1B1 systems that are necessary to implement advanced countermeasure capabilities against the global Radio Controlled IED (RCIED) threat. The unit cost increase from PB23 is driven by global supply chain issues and inflation for key semiconductor components.</p> <p>(7) JCREW COUNTER UNMANNED AIRCRAFT SYSTEMS (CUAS): Provides for the procurement and support of Joint CREW systems and tech insertion upgrades to systems to provide a Counter Unmanned Aircraft System (CUAS) capability in support of United States Fleet Forces requirements.</p> <p>(8) DRAKE SYSTEMS/TECH INSERTION UNDERSEA ENTERPRISE: Procures 13 DRAKE 2.0 systems and 27 Retrofit Kits to upgrade DRAKE 1.0 Systems currently fielded onboard all Submarine Classes. DRAKE utilizes open software architecture and Software Defined Radios, enabling upgrades as threats evolve. DRAKE 2.0 capability will be developed and fielded in two increments and DRAKE 1.0 systems will be retrofit to 2.0.</p> <p>(9) DRAKE SYSTEMS/TECH INSERTION AIR ENTERPRISE: Procures Retrofit Kits to upgrade 44 DRAKE 1.0 Systems currently fielded onboard all CVN Class Ships. DRAKE utilizes open software architecture and Software Defined Radios, enabling upgrades as threats evolve. DRAKE 2.0 capability will be developed and fielded in two increments and DRAKE 1.0 systems will be retrofit to 2.0.</p> <p>(10) NSW COUNTER UNMANNED AERIAL SYSTEM: Supports the procurement of Naval Surface Warfare to provide a Counter Unmanned Aerial System (C-UAS) capability in response to a Joint Urgent Operational Need (JUON)CC-0558.</p>		



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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2024 Navy								<b>Date:</b> March 2023				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 6				<b>P-1 Line Item Number / Title:</b> 5509 / EOD Equipment				<b>Item Number / Title [DODIC]:</b> 1 / EOD - CREW Equipment				

Cost Elements	O C O	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) EOD ROBOTICS <sup>(†)</sup>		2020	FLIR / Boston, MA	C / FFP	ARMY	May 2020	May 2021	91	148,983.87	Y		Sep 2017
1.1.1) EOD ROBOTICS <sup>(†)</sup>		2021	FLIR / Boston, MA	C / FFP	ARMY	Mar 2021	Mar 2022	64	150,581.39	Y		Sep 2017
1.1.1) EOD ROBOTICS <sup>(†)</sup>		2023	FLIR / Boston, MA	C / FFP	ARMY	Mar 2023	Mar 2024	16	150,000.00	Y		Sep 2017
1.1.1) EOD ROBOTICS <sup>(†)</sup>		2024	FLIR / Boston, MA	C / TBD	ARMY	Oct 2023	Oct 2024	81	179,310.52	Y		Sep 2017
3.1.1) JOINT CREW <sup>(†)</sup>		2016	NORTHROP GRUMMAN / San Diego, CA	C / FPIF	NAVSEA	Jul 2016	Mar 2017	25	117,160.00	Y		Oct 2014
3.1.1) JOINT CREW <sup>(†)</sup>	✓	2017	NORTHROP GRUMMAN / San Diego, CA	C / FFP	NAVSEA	Aug 2017	Dec 2018	577	139,400.00	Y		Aug 2016
3.1.1) JOINT CREW <sup>(†)</sup>	✓	2018	NORTHROP GRUMMAN / San Diego, CA	C / FFP	NAVSEA	Jun 2018	Dec 2019	35	348,580.00	Y		Aug 2016
3.1.2) TECH INSERTION and REFRESH <sup>(†)</sup>		2023	NORTHROP GRUMMAN / San Diego, CA	C / FFP	NAVSEA	Jul 2023	Nov 2024	112	72,651.79	Y		Mar 2022
3.1.2) TECH INSERTION and REFRESH <sup>(†)</sup>		2024	NORTHROP GRUMMAN / San Diego, CA	C / FFP	NAVSEA	Jan 2024	May 2025	47	74,276.60	Y		Mar 2022
3.1.4) JCREW COUNTER UNMANNED AIRCRAFT SYSTEMS (CUAS)	✓	2018	NORTHROP GRUMMAN / San Diego, CA	C / FFP	NAVSEA	Jun 2018	Dec 2019	75	378,666.00	Y		Aug 2016
3.1.4) JCREW COUNTER UNMANNED AIRCRAFT SYSTEMS (CUAS)	✓	2019	NORTHROP GRUMMAN / San Diego, CA	C / FFP	NAVSEA	Jan 2019	May 2020	50	498,000.00	Y		Aug 2016
3.1.4) JCREW COUNTER UNMANNED AIRCRAFT SYSTEMS (CUAS)		2023	NORTHROP GRUMMAN / San Diego, CA	C / FFP	NAVSEA	Jul 2023	Nov 2024	28	100,000.00	Y		Mar 2022

<sup>(†)</sup> indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																				Date: March 2023																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6										P-1 Line Item Number / Title: 5509 / EOD Equipment										Item Number / Title [DODIC]: 1 / EOD - CREW Equipment																					
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2016										Fiscal Year 2017														BALANCE										
OCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016										Calendar Year 2017																								
							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) EOD ROBOTICS <sup>(1)</sup>																																									
	1	2020	NAVY	91	0	91																												91							
	1	2021	NAVY	64	0	64																												64							
	1	2023	NAVY	16	0	16																												16							
	1	2024	NAVY	81	0	81																												81							
3.1.1) JOINT CREW <sup>(5)</sup>																																									
	2	2016	NAVY	25	0	25											A	-	-	-	-	-	-	-	-	-	25								0						
✓	2	2017	NAVY	577	0	577																									A	-	-								577
✓	2	2018	NAVY	35	0	35																												35							
3.1.2) TECH INSERTION and REFRESH <sup>(6)</sup>																																									
	3	2023	NAVY	112	0	112																												112							
	3	2024	NAVY	47	0	47																												47							
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP											

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																							Date: March 2023										
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6										P-1 Line Item Number / Title: 5509 / EOD Equipment													Item Number / Title [DODIC]: 1 / EOD - CREW Equipment										
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2018													Fiscal Year 2019													B A L A N C E
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) EOD ROBOTICS <sup>(1)</sup>																																	
	1	2020	NAVY	91	0	91																											91
	1	2021	NAVY	64	0	64																											64
	1	2023	NAVY	16	0	16																											16
	1	2024	NAVY	81	0	81																											81
3.1.1) JOINT CREW <sup>(5)</sup>																																	
	2	2016	NAVY	25	25	0																											0
✓	2	2017	NAVY	577	0	577	-	-	-	-	-	-	-	-	-	-	-	-	-	72	73	72	72	72	72	72	72			0			
✓	2	2018	NAVY	35	0	35											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
3.1.2) TECH INSERTION and REFRESH <sup>(6)</sup>																																	
	3	2023	NAVY	112	0	112																											112
	3	2024	NAVY	47	0	47																											47
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																				Date: March 2023																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6										P-1 Line Item Number / Title: 5509 / EOD Equipment										Item Number / Title [DODIC]: 1 / EOD - CREW Equipment																					
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2020										Fiscal Year 2021														BALANCE										
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT				Calendar Year 2020										Calendar Year 2021																					
							OC T	NO V	DE C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	NO V	DE C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P											
1.1.1) EOD ROBOTICS <sup>(1)</sup>																																									
	1	2020	NAVY	91	0	91							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91					0						
	1	2021	NAVY	64	0	64																					A	-	-	-	-	-	-	-	-	-	-	-	-	-	64
	1	2023	NAVY	16	0	16																												16							
	1	2024	NAVY	81	0	81																												81							
3.1.1) JOINT CREW <sup>(5)</sup>																																									
	2	2016	NAVY	25	25	0																												0							
✓	2	2017	NAVY	577	577	0																												0							
✓	2	2018	NAVY	35	0	35	-	-	10	10	10	5																						0							
3.1.2) TECH INSERTION and REFRESH <sup>(6)</sup>																																									
	3	2023	NAVY	112	0	112																												112							
	3	2024	NAVY	47	0	47	OC T	NO V	DE C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	NO V	DE C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	47										

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																							Date: March 2023										
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6										P-1 Line Item Number / Title: 5509 / EOD Equipment													Item Number / Title [DODIC]: 1 / EOD - CREW Equipment										
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2022												Fiscal Year 2023												BALANCE		
OCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022												Calendar Year 2023														
							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) EOD ROBOTICS <sup>(1)</sup>																																	
	1	2020	NAVY	91	91	0																										0	
	1	2021	NAVY	64	0	64	-	-	-	-	-	64																					0
	1	2023	NAVY	16	0	16															A -	-	-	-	-	-	-	16					
	1	2024	NAVY	81	0	81																										81	
3.1.1) JOINT CREW <sup>(5)</sup>																																	
	2	2016	NAVY	25	25	0																										0	
✓	2	2017	NAVY	577	577	0																										0	
✓	2	2018	NAVY	35	35	0																										0	
3.1.2) TECH INSERTION and REFRESH <sup>(6)</sup>																																	
	3	2023	NAVY	112	0	112															A -	-	-	112									
	3	2024	NAVY	47	0	47	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	47		

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2024 Navy																							Date: March 2023										
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6										P-1 Line Item Number / Title: 5509 / EOD Equipment													Item Number / Title [DODIC]: 1 / EOD - CREW Equipment										
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2024												Fiscal Year 2025												BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024												Calendar Year 2025														
							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) EOD ROBOTICS <sup>(1)</sup>																																	
	1	2020	NAVY	91	91	0																											0
	1	2021	NAVY	64	64	0																											0
	1	2023	NAVY	16	0	16	-	-	-	-	-	16																				0	
	1	2024	NAVY	81	0	81	A	-	-	-	-	-	-	-	-	-	-	81													0		
3.1.1) JOINT CREW <sup>(5)</sup>																																	
	2	2016	NAVY	25	25	0																											0
✓	2	2017	NAVY	577	577	0																											0
✓	2	2018	NAVY	35	35	0																											0
3.1.2) TECH INSERTION and REFRESH <sup>(6)</sup>																																	
	3	2023	NAVY	112	0	112	-	-	-	-	-	-	-	-	-	-	-	19	19	19	19	19	17						0				
	3	2024	NAVY	47	0	47					A	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	8	8	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			

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Exhibit P-21, Production Schedule: PB 2024 Navy																							Date: March 2023											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6										P-1 Line Item Number / Title: 5509 / EOD Equipment													Item Number / Title [DODIC]: 1 / EOD - CREW Equipment											
Cost Elements (Units in Each)							Fiscal Year 2026													Fiscal Year 2027													BALANCE	
OCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT				Calendar Year 2026												Calendar Year 2027												
							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) EOD ROBOTICS <sup>(1)</sup>																																		
	1	2020	NAVY	91	91	0																										0		
	1	2021	NAVY	64	64	0																										0		
	1	2023	NAVY	16	16	0																										0		
	1	2024	NAVY	81	81	0																										0		
3.1.1) JOINT CREW <sup>(5)</sup>																																		
	2	2016	NAVY	25	25	0																										0		
✓	2	2017	NAVY	577	577	0																										0		
✓	2	2018	NAVY	35	35	0																										0		
3.1.2) TECH INSERTION and REFRESH <sup>(6)</sup>																																		
	3	2023	NAVY	112	112	0																										0		
	3	2024	NAVY	47	40	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				

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Exhibit P-21, Production Schedule: PB 2024 Navy									Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6					P-1 Line Item Number / Title: 5509 / EOD Equipment				Item Number / Title [DODIC]: 1 / EOD - CREW Equipment			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2024	1-8-5 For 2024	MAX For 2024	Initial				Reorder			
					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	FLIR - Boston, MA			TBD	0	0	0	0	0	0	0	0
2	NORTHROP GRUMMAN - San Diego, CA			TBD	0	0	0	0	0	0	0	0
3	NORTHROP GRUMMAN - San Diego, CA			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).



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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 6: Other Ordnance Support Equipment							<b>P-1 Line Item Number / Title:</b> 5543 / Items Less Than \$5 Million					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	95.061	6.997	5.938	6.171	0.000	6.171	6.959	6.082	6.200	6.349	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	95.061	6.997	5.938	6.171	0.000	6.171	6.959	6.082	6.200	6.349	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>95.061</b>	<b>6.997</b>	<b>5.938</b>	<b>6.171</b>	<b>0.000</b>	<b>6.171</b>	<b>6.959</b>	<b>6.082</b>	<b>6.200</b>	<b>6.349</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

RA004 - QUALITY EVAL TECH & EQUIPMENT (QETE): Provides funding to procure test systems and equipment in support of the Navy weapons systems and ordnance Quality Evaluation (QE) Program. The purpose of the Navy QE Program is to ensure that only safe, quality, reliable, and ready Navy and Marine Corps weapons systems and ordnance items are provided to the Fleet. The result of the QE stock surveillance testing is technical readiness data used to predict when items degrade to the point where they become unsafe to store or would fail to function (unreliable) when needed and should be removed from service.

RA005 - FLEET MINE SUPPORT EQUIPMENT: Mine Countermeasure (MCM) Targets are used to physically and electronically emulate foreign mine threats for Fleet training, exercises, ranges, and platform and system validation. Instrumented MCM targets can be programmed to behave and function like real foreign mine threats for mine sweeping and platform validation whereas non-instrumented MCM targets emulate foreign threats physically for mine hunting, mine neutralization, and system validation.

RA007 - GRIFFIN MISSILE SYSTEM (GMS) INITIAL TECHNICAL REFRESH]: RA007 funding supports major initial replacement systems for the Griffin Missile (GMS) Program to include Electro-Optical Infra-Red sensor with laser designator, Battlefield Management System, Launcher/Launcher components. Funding also procures all technical refresh upgrades of the GMS hardware and software aboard Patrol Coastal (PC) ships. Upgrades will include: Battlefield Management System (BMS) workstation hardware, latest version of BMS system software, and refresher training. Funds will also support management of contractor efforts, preparation of installation plans, performance of ship checks, procurement of materials, oversight of shipboard installation and Quality Assurance (QA), conduct of sparing analysis, reliability analysis, system safety analysis, logistical support, installation and testing of all software and shipboard training.

RA008 - FFG 62 - FRIGATE OTHER GOVERNMENT FURNISHED EQUIPMENT (GFE): Provides funding to procure the Intelligence Carry On Program (ICOP) as FFG 62 GFE. The procurement of the ruggedized carry-on/carry-off ICOP workstation and Communications Module 3 (CM3) antenna/receiver sets will provide a suite of multi-INT Processing, Exploitation and Dissemination (PED) capabilities, will process and correlate Electronic Intelligence (ELINT) and communications externals (COMEXT) for critical I&W and maritime tracking of non-cooperative targets, will support a wide range of direct downlink airborne Full Motion Video (FMV) from manned and unmanned aerial vehicles (UAVs), will integrate with shipboard organic cameras supports monitoring of multiple video feeds during high tempo operations and will ensure unit-level sensor data is discoverable, accessible and usable to the broader DCGS Integration Backbone (DIB)/Joint community.

RA003 - INDUSTRIAL FACILITIES: Description: Provides funding for the procurement of industrial equipment in support of core manufacturing and production requirements at the Government-Owned/ Contractor- Operated (GOCO) Naval Industrial Reserve Ordnance Plant (NIROP) Allegany Ballistics Laboratory (ABL) located in Rocket Center, WV. NIROP ABL is a key U.S. military industrial facility that is

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 6: Other Ordnance Support Equipment		<b>P-1 Line Item Number / Title:</b> 5543 / Items Less Than \$5 Million
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
<b>Line Item MDAP/MAIS Code: N/A</b> the source of tactical missile propulsion systems, fuzes, conventional warheads, metal and composite structures and precision projectiles in accordance with the Defense Industrial Reserve Act (10 USC 2535). Supports environmental, safety, energy conservation, and major repair projects at the GOCO facility.		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy								<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 6: Other Ordnance Support Equipment						<b>P-1 Line Item Number / Title:</b> 5543 / Items Less Than \$5 Million				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A										
<b>Exhibits Schedule</b>					<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Exhibit Type</b>	<b>Title*</b>	<b>Subexhibits</b>	<b>ID CD</b>	<b>MDAP/MAIS Code</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>
P-40a	Items Less Than \$5 Million				- / 95.061	- / 6.997	- / 5.938	- / 6.171	- / -	- / 6.171
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 95.061</b>	<b>- / 6.997</b>	<b>- / 5.938</b>	<b>- / 6.171</b>	<b>- / 0.000</b>	<b>- / 6.171</b>
<small>*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.</small>										
<small>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</small>										
<p><b>Justification:</b></p> <p>This generic (non-weapons systems specific) test equipment is needed to assess the effects of aging and exposure to environmental conditions on Navy weapons systems and ordnance such as mines, gun ammunition, missiles, pyrotechnics, demolition systems/devices, bombs, and torpedoes throughout the in-service portion of their life cycle and will be located at NAVSEA engineering field activities. Requirements for the test equipment come from a need to replace or modernize obsolete or economically non-repairable equipment or to acquire new or expanded generic test capabilities when new evaluation techniques or process are needed. The equipment procured by these funds are generally "one of a kind" and are used to support generic Navy weapons systems and ordnance types. Weapons systems specific equipment is procured/funded via the individual weapons system Program Management offices. After the weapon specific equipment has entered the inventory, these funds adapt the capability, if feasible, to become more generic and support more than one weapon system. This reduces the overall economic burden to the Navy. The FY24 budget for Items Less Than \$5 Million reflects a net increase of \$0.233M.</p> <p>FY24 Justification follows:</p> <p>FY24 \$0.011M increase to the Quality Evaluation Technical &amp; Equipment (QETE - RA004) program is due to net rate adjustments and normal fluctuations in pricing for this program.</p> <p>FY24 \$0.148M increase to the Fleet Mine Support Equipment Program (RA005) is due to normal fluctuations in pricing and net rate adjustments for this program.</p> <p>FY24 \$0.060M increase to the FFG 62 Frigate Other Government Furnished Equipment (GFE) Program (RA008) supports the FFG 62 Component Cost Position and Full Funding Certification upon Milestone B.</p> <p>FY24 \$0.007M increase to the Industrial Facilities Program (RA003) is a result of normal fluctuations in pricing for this program. Funding supports the procurement of an Automatic Bar Machine to be used to fabricate metal parts to support rocket motor and warhead production. This new machine will support continued efforts to maintain efficiency in the manufacturing process as it replaces shop equipment nearing the end of useful life.</p>										

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy																Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6						P-1 Line Item Number / Title: 5543 / Items Less Than \$5 Million									Aggregated Items Title: Items Less Than \$5 Million					
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) MAINTENANCE SUPPORT ACTIVITIES																				
1.1) RA004 - QUALITY EVAL TECH & EQUIPMENT (QETE) <sup>(1)</sup>	B		-	-	26.094	-	-	-	-	-	1.250	-	-	1.268	-	-	-	-	-	1.268
1.2) Rolling Stock on behalf of USFFC	A		-	-	-	-	-	1.187	-	-	-	-	-	-	-	-	-	-	-	-
1.3) USFFC - ORDNANCE MATERIAL HANDLING EQUIPMENT (BSO 60)	A		-	-	0.482	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) USFFC - LOCOMOTIVE REPLACEMENT (BSO 60)	A		-	-	-	-	-	1.651	-	-	-	-	-	-	-	-	-	-	-	-
1.5) USFFC - ROLLING STOCK RAIL CARS (BSO 60)	A		-	-	-	-	-	1.029	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) MAINTENANCE SUPPORT ACTIVITIES			-	-	26.576	-	-	3.867	-	-	1.250	-	-	1.268	-	-	-	-	-	1.268
2) MINE COUNTERMEASURES FORCES																				
2.1) RA005 - FLEET MINE SUPPORT EQUIPMENT <sup>(2)</sup>	B		-	-	20.013	-	-	2.636	-	-	2.661	-	-	2.809	-	-	-	-	-	2.809
Subtotal: 2) MINE COUNTERMEASURES FORCES			-	-	20.013	-	-	2.636	-	-	2.661	-	-	2.809	-	-	-	-	-	2.809
3) FRIGATES - MISSILE																				
3.1) RA006 - GRIFFIN MISSILE SYSTEM (GMS)	A		-	-	24.639	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) RA007 - GRIFFIN MISSILE SYSTEM (GMS) INITIAL TECHNICAL REFRESH	A		-	-	6.313	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.3) RA008 - FFG-FRIGATE OTHER GOVERNMENT FURNISHED EQUIPMENT (GFE) <sup>(3)</sup>	A		-	-	-	-	-	-	-	-	1.493	-	-	1.553	-	-	-	-	-	1.553
Subtotal: 3) FRIGATES - MISSILE			-	-	30.952	-	-	-	-	-	1.493	-	-	1.553	-	-	-	-	-	1.553
4) PATROL COMBATANTS																				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 6						P-1 Line Item Number / Title: 5543 / Items Less Than \$5 Million									Aggregated Items Title: Items Less Than \$5 Million					
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) RA007 - GRIFFIN MISSILE SYSTEM (GMS) INITIAL TECHNICAL REFRESH	A		-	-	6.817	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) PATROL COMBATANTS			-	-	6.817	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5) TOMAHAWK AND TOMAHAWK MISSILE PLANNING CENTER																				
5.1) RA003 - INDUSTRIAL FACILITIES <sup>(4)</sup>	A		5,352K	2	10.703	494,000.00	1	0.494	534,000.00	1	0.534	541,000.00	1	0.541	-	-	-	541,000.00	1	0.541
Subtotal: 5) TOMAHAWK AND TOMAHAWK MISSILE PLANNING CENTER			-	-	10.703	-	-	0.494	-	-	0.534	-	-	0.541	-	-	-	-	-	0.541
Total			-	-	95.061	-	-	6.997	-	-	5.938	-	-	6.171	-	-	-	-	-	6.171

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

Footnotes:

<sup>(1)</sup> FY24 increase due to inflation.

<sup>(2)</sup> FY24 increase due to inflation.

<sup>(3)</sup> FY24 increase supports Component Cost Position and Full Funding Certification.

<sup>(4)</sup> FY24 increase due to inflation.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 7: Other Expendable Ordnance							<b>P-1 Line Item Number / Title:</b> 5530 / Anti-ship Missile Decoy System					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	109.508	76.994	86.264	56.630	0.000	56.630	80.039	93.436	129.073	131.621	942.752	1,706.317
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	109.508	76.994	86.264	56.630	0.000	56.630	80.039	93.436	129.073	131.621	942.752	1,706.317
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>109.508</b>	<b>76.994</b>	<b>86.264</b>	<b>56.630</b>	<b>0.000</b>	<b>56.630</b>	<b>80.039</b>	<b>93.436</b>	<b>129.073</b>	<b>131.621</b>	<b>942.752</b>	<b>1,706.317</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Anti-Ship Missile Decoy Program covers a family of decoys and the equipment to deploy them. It is an essential element of the Anti-Ship Missile Defense tactics to counter the threat of enemy homing missiles. Nulka is a joint program with Australia, and is currently in service with the Australian, Canadian, and United States Navies. Nulka consists of the Decoy Launching System (DLS) (MK 53) and Offboard Active Decoy (MK 234). This line contains various equipment and subsystems for a system which will provide the capability to defeat the effectiveness of hostile Anti-Ship cruise missiles. The MK 53 DLS consists of a Decoy Launch Processor (DLP), launching power supplies, and from two to six launchers depending on the ship class. Each launcher is capable of storing and launching two Nulka decoys. The MK 53 DLS provides the launch authorization and flight demands to the Nulka decoy when a Nulka engagement is initiated by the EW operator. The MK 53 DLS has been installed on the CG 47, CVN 68, DDG 51, FFG 7, LSD 41 and LSD 49 Classes in prior years.

The Legacy Nulka decoy consists of the kit assembly, rocket motor assembly (RMAs), canister assembly and legacy payload. The legacy Nulka decoy can no longer be procured due to obsolescence issues which will be addressed by new production of kit assemblies (VV200) and RMAs (VV201). Legacy payload obsolescence issues will be addressed by procurement of Nulka payloads (VV005).

VV003: Funding is for Engineering Change Proposals (ECPs)/Ordinance Alterations (ORDALT) to address obsolescence, quality assurance, reliability, safety, Electromagnetic Interference (EMI), and diminishing manufacturing source issues. ECP funding will support DLS hardware updates including Circuit Card Assembly (CCA) redesigns, Inertial Measurement Unit (IMU) initialization improvements, Power Supply System (PSS) modernization. Logistics funding will support maintenance of decoy and special purpose test equipment, non-recurring costs to produce engineering equipment, and configuration management tools for Flight Control Units, Propulsion Igniter Units, Thrust Control Units, Thermal Batteries, Spin Control Units and Rocket Motor Assemblies.

VV830: Funding is for Production Engineering support to the MK 234 Nulka Decoy, Nulka Kit Assemblies, Rocket Motor Assembly and Nulka Payloads.

VV500: Funding is for procurement of Advanced Offboard Electronic Warfare (AOEW) mass models, ALQ-248 pods and spares, as well as Battery room installation planning and installations, ship integration, modeling and simulation, and Production Support. Production Support efforts include: Program Management support training material updates (Integrated Electronic Technical Manuals (IETM)), systems user manual, operational training materials), System of Systems integration and sparing support.

VV200: Funding is for procurement of Nulka Kit Assemblies (includes varying quantities and combinations of: Flight Control Units, Propulsion Igniter Units, Thrust Control Units, Spin Control Units, and Thermal Batteries based on requirements). The Nulka Kit Assembly procurements are critical to extend the in-service life of the Nulka Round.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 7: Other Expendable Ordnance		<b>P-1 Line Item Number / Title:</b> 5530 / Anti-ship Missile Decoy System
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
<b>Line Item MDAP/MAIS Code:</b> N/A VV201: Funding is for procurement of Rocket Motor Assembly. The Rocket Motor Assembly (RMA) procurements are critical to extend the in-service life of the Nulka Round. VV005: Funding is for procurement of Nulka Modified Payload and Nulka Payloads.		



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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 04: Ordnance Support Equipment / BSA 7: Other Expendable Ordnance						P-1 Line Item Number / Title: 5530 / Anti-ship Missile Decoy System				
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	5530 - ANTI SHIP MISSILE DECOY SYSTEM	P-5a			- / 99.005	- / 76.994	- / 86.264	- / 56.630	- / -	- / 56.630
P-3a	1 / VV001 NULKA SYSTEMS (TBD)				- / 10.503	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 109.508	- / 76.994	- / 86.264	- / 56.630	- / 0.000	- / 56.630
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	5530 - ANTI SHIP MISSILE DECOY SYSTEM	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / VV001 NULKA SYSTEMS (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 10.503
P-40	Total Gross/Weapon System Cost				- / 80.039	- / 93.436	- / 129.073	- / 131.621	- / 942.752	- / 1,706.317
*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.										

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7							P-1 Line Item Number / Title: 5530 / Anti-ship Missile Decoy System								Aggregated Items Title: 5530 - ANTI SHIP MISSILE DECOY SYSTEM					
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) VV002 - NULKA DECOYS																				
1.1) Nulka Decoys	A		2,274K	1	2.274	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) VV002 - NULKA DECOYS			-	-	2.274	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2) VV003 - ENG CHANGE PROPOSALS (ECPs)/ILS SUPPORT																				
2.1) ECPs	A		-	-	6.064	-	-	1.448	-	-	1.469	-	-	1.503	-	-	-	-	-	1.503
2.2) Logistics/ Production Support	A		-	-	11.075	-	-	3.319	-	-	3.301	-	-	3.366	-	-	-	-	-	3.366
Subtotal: 2) VV003 - ENG CHANGE PROPOSALS (ECPs)/ILS SUPPORT			-	-	17.139	-	-	4.767	-	-	4.770	-	-	4.869	-	-	-	-	-	4.869
3) VV830 - PRODUCTION ENGINEERING																				
3.1) Production Engineering <sup>(1)</sup>	A		-	-	4.803	-	-	1.550	-	-	4.309	-	-	4.228	-	-	-	-	-	4.228
Subtotal: 3) VV830 - PRODUCTION ENGINEERING			-	-	4.803	-	-	1.550	-	-	4.309	-	-	4.228	-	-	-	-	-	4.228
4) VV500 - ADVANCED OFFBOARD/EW																				
4.1) AOEW: Mass Models <sup>(2)(t)</sup>	A		-	-	-	-	-	-	120,000.00	2	0.240	-	-	-	-	-	-	-	-	-
4.2) AOEW: AN/ALQ-248 Pods <sup>(3)(t)</sup>	A		8,911K	2	17.822	11,065K	2	22.131	11,287K	2	22.574	11,513K	2	23.025	-	-	-	11,513K	2	23.025
4.3) AOEW: Production Support <sup>(4)</sup>	A		-	-	0.549	-	-	1.900	-	-	4.217	-	-	2.471	-	-	-	-	-	2.471
4.4) AOEW: Ship Installation Planning <sup>(5)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.408	-	-	-	-	-	0.408
4.5) AOEW: Ship Integration <sup>(6)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.561	-	-	-	-	-	0.561
4.6) AOEW: Modeling & Simulation <sup>(7)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	1.938	-	-	-	-	-	1.938
4.7) AOEW: Spares <sup>(8)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.510	-	-	-	-	-	0.510
4.8) AOEW: Engineering Services <sup>(9)</sup>	A		-	-	-	-	-	0.564	-	-	3.069	-	-	0.587	-	-	-	-	-	0.587
Subtotal: 4) VV500 - ADVANCED OFFBOARD/EW			-	-	18.371	-	-	24.595	-	-	30.100	-	-	29.500	-	-	-	-	-	29.500
5) VV200 - NULKA KIT ASSEMBLIES																				
5.1) Nulka Kit Assemblies <sup>(10)(t)</sup>	A		119,682.35	85	10.173	297,083.00	48	14.260	311,346.15	52	16.190	333,214.29	14	4.665	-	-	-	333,214.29	14	4.665
Subtotal: 5) VV200 - NULKA KIT ASSEMBLIES			-	-	10.173	-	-	14.260	-	-	16.190	-	-	4.665	-	-	-	-	-	4.665

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2024 Navy																<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7								<b>P-1 Line Item Number / Title:</b> 5530 / Anti-ship Missile Decoy System								<b>Aggregated Items Title:</b> 5530 - ANTI SHIP MISSILE DECOY SYSTEM			

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)
6) VV201 - ROCKET MOTOR ASSEMBLY (RMA)																				
6.1) Rocket Motor Assembly (RMA) (11)(t)	A		132,413.79	87	11.520	128,960.00	100	12.896	131,410.00	100	13.141	133,680.00	100	13.368	-	-	-	133,680.00	100	13.368
Subtotal: 6) VV201 - ROCKET MOTOR ASSEMBLY (RMA)			-	-	11.520	-	-	12.896	-	-	13.141	-	-	13.368	-	-	-	-	-	13.368
7) VV202 - CANISTER ASSEMBLY																				
7.1) Canister Assembly	A		53,000.00	60	3.180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) VV202 - CANISTER ASSEMBLY			-	-	3.180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9) VV005 - NULKA PAYLOAD																				
9.1) Nulka Payload (12)(t)	A		589,718.75	32	18.871	498,052.63	38	18.926	572,709.00	31	17.754	-	-	-	-	-	-	-	-	-
9.2) Nulka Modified Payload <sup>(t)</sup>	A		1,267K	10	12.674	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 9) VV005 - NULKA PAYLOAD			-	-	31.545	-	-	18.926	-	-	17.754	-	-	-	-	-	-	-	-	-
Total			-	-	99.005	-	-	76.994	-	-	86.264	-	-	56.630	-	-	-	-	-	56.630

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

<sup>(t)</sup> indicates the presence of a P-5a

**Footnotes:**

<sup>(1)</sup> VV830 - FY24 Production Engineering efforts support MK 234 Nulka Decoy, Nulka Kit Assemblies, Rocket Motor Assembly and Nulka Payloads.

<sup>(2)</sup> VV500[4.1] - FY23 funding is for procurement of Advanced Offboard EW mass models. Only two (2) Mass Models are required to be procured as they are not fielded assets; they support testing requirements leading up to IOT&E.

<sup>(3)</sup> VV500[4.2] - Funding across the FYDP is for procurement of AOEW AN/ALQ-248 Pods. The unit cost estimates reflect unit cost increases due to re-negotiations plus annual adjustments for inflation. Since the FY23 budget request, the Pod unit cost increased due to array complexity and lack of savings from Volume Discount due to a low number of units procured. FY23 funding was internally reprioritized from Nulka Payloads (PU VV005) to AOEW in order to fully fund AN/ALQ-248 Pod procurement.

<sup>(4)</sup> VV500[4.3] - FY23-FY28 funding is for Production Support of Program Management Support, pre-installation work ups and documentation, updates to training material (IETM, Systems user manual, operational training materials), System of Systems integration, depot analysis, and sparing support. Production Support funding also supports the beginning of production unit deliveries and will require integration and certification. Since the FY23 budget request, the Pod unit cost increased due to array complexity and lack of savings from Volume Discount due to a low number of units procured. Subsequently, FY23 funding was internally re-aligned from Production Support to cover the anticipated increase in LRIP pricing which is currently being renegotiated.

<sup>(5)</sup> VV500[4.4] - FY24-FY25 funding is for Ship Installation Planning to cover advanced planning activities related to pod and battery room installation which commences after the program achieves IOT&E. Since the FY23 budget request, the Pod unit cost increased due to array complexity and lack of savings from Volume Discount due to a low number of units procured. Subsequently, FY23 funding was internally re-aligned from Ship Installation Planning to cover the anticipated increase in LRIP pricing which is currently being renegotiated.

<sup>(6)</sup> VV500[4.5] - FY24-FY25 funding is for Ship Integration, interface control drawings (ICDs), topside studies, and planning activities undertaken by SUPSHIP as AOEW prepares for installation on ship platforms. Since the FY23 budget request, the Pod unit cost increased due to array complexity and lack of savings from Volume Discount due to a low number of units procured. Subsequently, FY23 funding was internally re-aligned from Ship Integration to cover the anticipated increase in LRIP pricing which is currently being renegotiated.

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7	<b>P-1 Line Item Number / Title:</b> 5530 / Anti-ship Missile Decoy System	<b>Aggregated Items Title:</b> 5530 - ANTI SHIP MISSILE DECOY SYSTEM
<p><sup>(7)</sup> VV500[4.6] - FY24-FY25 funding is for Modeling &amp; Simulation tactical model employment to support development and operational testing. Modeling deficiencies identified during development and testing will be updated to support operational testing currently scheduled for FY26. Since the FY23 budget request, the Pod unit cost increased due to array complexity and lack of savings from Volume Discount due to a low number of units procured. Subsequently, FY23 funding was internally re-aligned from Modeling &amp; Simulation to cover the anticipated increase in LRIP pricing which is currently being renegotiated.</p> <p><sup>(8)</sup> VV500[4.7] - FY24-FY25 funding is for Spares Hardware procurement to support AOEW production and fielding. Since the FY23 budget request, the Pod unit cost increased due to array complexity and lack of savings from Volume Discount due to a low number of units procured. Subsequently, FY23 funding was internally re-aligned from Spares to cover the anticipated increase in LRIP pricing which is currently being renegotiated.</p> <p><sup>(9)</sup> VV500[4.8] - Since the FY23 budget request, funding has been added for Engineering Services to support Contractor efforts including Software updates and modifications, Engineering Change Proposal (ECP) activities, and LRIP updates to support operational use.</p> <p><sup>(10)</sup> VV200 - FY23 Nulka Kit Assembly Funding (\$1.200M) was internally reprioritized to fully fund required AOEW Production Support efforts. FY24 Nulka Kit Assemblies (VV200) funding supports critical Fleet requirements for procurements that are required to extend the in-service life of the Nulka Round. FY24 qtys and funding decreased from FY23 due to a reduction to support higher Navy priorities. Unit cost per fiscal year varies due to Kit variation.</p> <p><sup>(11)</sup> VV201 - Rocket Motor Assembly (VV201) funding is required to extend the in-service life of the Nulka Round. Contractual agreements with Australia require 100 unit minimum buy per year. In FY24, qty 100 of Rocket Motor Assemblies is being procured.</p> <p><sup>(12)</sup> VV005 - Funding is for procurement of Nulka Modified Payloads and Nulka Payloads to meet critical Fleet requirements. Funding for this line ends in FY23.</p>		

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<b>Exhibit P-5a, Procurement History and Planning: PB 2024 Navy</b>									<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7				<b>P-1 Line Item Number / Title:</b> 5530 / Anti-ship Missile Decoy System					<b>Aggregated Items:</b> 5530 - ANTI SHIP MISSILE DECOY SYSTEM			
Item Number / Title [DODIC]	O C O	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
<b>4) VV500 - ADVANCED OFFBOARD/EW</b>												
4.1) AOEW: Mass Models <sup>(2)</sup>		2023	Lockheed Martin / Syracuse, NY	C / FFP	Washington Navy Yard	Mar 2023	Mar 2025	2	120,000.00	Y		
4.2) AOEW: AN/ALQ-248 Pods <sup>(3)</sup>		2021	Lockheed Martin / Syracuse, NY	C / FFP	Washington Navy Yard	Sep 2021	Sep 2023	2	8,911K	Y		
4.2) AOEW: AN/ALQ-248 Pods <sup>(3)</sup>		2022	Lockheed Martin / Syracuse, NY	C / FFP	Washington Navy Yard	Sep 2022	Sep 2024	2	11,065K	Y		
4.2) AOEW: AN/ALQ-248 Pods <sup>(3)</sup>		2023 <sup>(13)</sup>	Lockheed Martin / Syracuse, NY	C / FFP	Washington Navy Yard	Mar 2023	Mar 2025	2	11,287K	Y		
4.2) AOEW: AN/ALQ-248 Pods <sup>(3)</sup>		2024	Lockheed Martin / Syracuse, NY	C / FFP	Washington Navy Yard	Mar 2024	Mar 2026	2	11,513K	Y		
<b>5) VV200 - NULKA KIT ASSEMBLIES</b>												
5.1) Nulka Kit Assemblies <sup>(10)</sup>		2020 <sup>(14)</sup>	BAES / AUSTRALIA	C / FFP	Canberra, Australia	Jul 2020	Mar 2023	35	116,600.00	Y		
5.1) Nulka Kit Assemblies <sup>(10)</sup>		2021	BAES / AUSTRALIA	C / FFP	Canberra, Australia	Jul 2021	Jan 2023	50	121,840.00	Y		
5.1) Nulka Kit Assemblies <sup>(10)</sup>		2022	BAES / AUSTRALIA	C / FFP	Canberra, Australia	Mar 2022	Sep 2023	48	297,083.00	Y		
5.1) Nulka Kit Assemblies <sup>(10)</sup>		2023 <sup>(15)</sup>	BAES / AUSTRALIA	C / FFP	Canberra, Australia	Jan 2023	Jul 2024	52	311,346.15	Y		
5.1) Nulka Kit Assemblies <sup>(10)</sup>		2024	BAES / AUSTRALIA	C / FFP	Canberra, Australia	Jan 2024	Jul 2025	14	333,214.29	Y		
<b>6) VV201 - ROCKET MOTOR ASSEMBLY (RMA)</b>												
6.1) Rocket Motor Assembly (RMA) <sup>(11)</sup>		2020 <sup>(16)</sup>	BAES / AUSTRALIA	C / CPFF	Canberra, Australia	Jul 2020	Mar 2023	35	141,943.00	Y		
6.1) Rocket Motor Assembly (RMA) <sup>(11)</sup>		2021 <sup>(17)</sup>	BAES / AUSTRALIA	C / CPFF	Canberra, Australia	Jan 2021	Jun 2023	52	126,000.00	Y		
6.1) Rocket Motor Assembly (RMA) <sup>(11)</sup>		2022	BAES / AUSTRALIA	C / CPFF	Canberra, Australia	Mar 2022	Sep 2023	100	128,960.00	Y		
6.1) Rocket Motor Assembly (RMA) <sup>(11)</sup>		2023	BAES / AUSTRALIA	C / CPFF	Canberra, Australia	Dec 2022	Jun 2024	100	131,410.00	Y		
6.1) Rocket Motor Assembly (RMA) <sup>(11)</sup>		2024	BAES / AUSTRALIA	C / CPFF	Canberra, Australia	Dec 2023	Jun 2025	100	133,680.00	Y		
<b>9) VV005 - NULKA PAYLOAD</b>												
9.1) Nulka Payload <sup>(12)</sup>		2021	Harris / Clifton, NJ	SS / CPFF	Washington Navy Yard	Sep 2021	Mar 2023	32	589,719.00	Y		
9.1) Nulka Payload <sup>(12)</sup>		2022	Harris / Clifton, NJ	SS / CPFF	Washington Navy Yard	Sep 2022	Mar 2024	38	498,052.63	Y		
9.1) Nulka Payload <sup>(12)</sup>		2023 <sup>(18)</sup>	Harris / Clifton, NJ	SS / CPFF	Washington Navy Yard	Sep 2023	Mar 2025	31	572,709.00	Y		
9.2) Nulka Modified Payload		2020	Naval Systems Management Activity / Washington, D.C.	C / CPFF	Washington, DC	Jul 2020	Jun 2022	5	1,336K	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy								Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7				P-1 Line Item Number / Title: 5530 / Anti-ship Missile Decoy System				Aggregated Items: 5530 - ANTI SHIP MISSILE DECOY SYSTEM				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
9.2) Nulka Modified Payload		2021	Naval Systems Management Activity / Washington, D.C.	C / CPFF	Washington, DC	Mar 2021	Jul 2022	5	1,198K	Y		

**Footnotes:**  
(13) Since the FY23 budget request, the FY23 Pod unit cost increased due to array complexity and lack of savings from Volume Discount due to a low number of units procured.  
(14) Delivery Date slippage due to BAE AUS contractual production delays.  
(15) Decrease in quantities due to funding reduction for higher Navy priorities.  
(16) Delivery date slippage from Aug 2022 to Mar 2023 is due to BAES / Australian subcontractor propellant production delays.  
(17) Delivery date slippage from Jun 2022 to Jun 2023 is due to BAES / Australian subcontractor propellant production delays.  
(18) Award date and delivery date slippages are due to repair cost negotiations.

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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7				P-1 Line Item Number / Title: 5530 / Anti-ship Missile Decoy System						Modification Number / Title: 1 / VV001 NULKA SYSTEMS		
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 ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	10.503	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.503
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	10.503	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.503
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority ( <i>\$ in Millions</i> )	10.503	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.503
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**  
[NULKA SYSTEMS] The MK 53 Decoy Launching System (DLS) consists of a Decoy Launch Processer (DLP), launching power supplies and from two to six launchers depending on the ship class. Each launcher is capable of storing and launching two Nulka decoys. The MK 53 DLS provides the launch authorization and flight demands to the Nulka decoy when a Nulka engagement is initiated by the EW operator. The MK 53 DLS has been installed on the CG 47, CVN 68, DDG 51, FFG 7, LSD 41 and LSD 49 Classes in prior years.

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Exhibit P-3a, Individual Modification: PB 2024 Navy								Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7			P-1 Line Item Number / Title: 5530 / Anti-ship Missile Decoy System					Modification Number / Title: 1 / VV001 NULKA SYSTEMS					
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: VV001 NULKA SYSTEMS													
B Kits													
Recurring													
1.1.1) NULKA SYSTEMS - NonOrganic <sup>(19)</sup>	1 / 0.683	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.683	
Subtotal: Recurring	- / 0.683	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.683	
Subtotal: VV001 NULKA SYSTEMS	1 / 0.683	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.683	
Subtotal: Procurement, All Modification Items	- / 0.683	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.683	
Installation													
Modification Item 1 of 1: VV001 NULKA SYSTEMS	- / 9.820	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 9.820	
Subtotal: Installation	- / 9.820	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 9.820	
Total													
Total Cost (Procurement + Support + Installation)	10.503	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.503	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy											<b>Date:</b> March 2023																				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7										<b>P-1 Line Item Number / Title:</b> 5530 / Anti-ship Missile Decoy System										<b>Modification Number / Title:</b> 1 / VV001 NULKA SYSTEMS											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 1 of 1:</b> VV001 NULKA SYSTEMS																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Sechan Electronics, Inc.															Manufacturer Location: Lititz, PA																
Administrative Leadtime <i>(in Months)</i> : 6															Production Leadtime <i>(in Months)</i> : 14																
<b>Dates</b>		<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>					
Contract Dates																															
Delivery Dates																															
<b>Installation Information</b>																															
<b>Method of Implementation:</b> AIT:: Installation Name: NULKA SYSTEMS																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>		<b>FY 2025</b>		<b>FY 2026</b>		<b>FY 2027</b>		<b>FY 2028</b>		<b>To Complete</b>		<b>Total</b>							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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 / 9.820		- / -		1 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		1 / 9.820					
FY 2022		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2023		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
Total		0 / 9.820		- / -		1 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		1 / 9.820					
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
<b>Footnotes:</b> <sup>(19)</sup> Single FY23 install (funded with FY21 funding) is due to the availability shifting one FY to the right from FY22 to FY23 since the FY23 budget request.																															

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 7: Other Expendable Ordnance							<b>P-1 Line Item Number / Title:</b> 5661 / Submarine Training Device Mods					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	345.294	75.813	80.591	76.954	0.000	76.954	80.983	82.747	84.365	86.056	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	345.294	75.813	80.591	76.954	0.000	76.954	80.983	82.747	84.365	86.056	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>345.294</b>	<b>75.813</b>	<b>80.591</b>	<b>76.954</b>	<b>0.000</b>	<b>76.954</b>	<b>80.983</b>	<b>82.747</b>	<b>84.365</b>	<b>86.056</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<p><b>Description:</b></p> <p>The OPN 5661 line procures, installs and delivers training devices to eight Submarine Training Facilities. These funds support Hull, Mechanical, and Electrical (HM&amp;E), Engineering, Navigation and Combat Control System training requirements, training system upgrades and modernization for the Submarine Weapon Systems. Training devices develop system operations from basic through advanced seamanship skills to submarine crews utilized in all submarine mission sets. Funding includes modernization of training devices to maintain compatibility with existing fleet operational equipment and to implement Trainer Enhancement Changes (TECs) as directed by the Fleet Type Commanders and Resource Sponsor (N97). Funding also includes procurement of training devices at Portsmouth Naval Shipyard for fundamental skills required for crew certification and proficiencies during extended maintenance periods.</p> <p>Line item 5661 is broken into five functional areas to support submarine training: Hull Mechanical &amp; Electrical Trainers (HM&amp;E), Engineering Trainers, Navigation Trainers, Combat Control Acoustic Trainers and Submarine Attack Center Trainers.</p> <p>[P40A / Submarine Training]: This line provides funds to procure and modernize training devices to keep them compatible with Fleet operational equipment and to implement Training Enhancement Changes (TECs) to the training systems.</p> <p>[P40A / TD 100 HM&amp;E TRAINERS]: This line procures HM&amp;E Fleet and Team Trainer Technical Training Equipment (TTE), Training Devices (TDs) and Training Enhancement Changes (TECs). Technical Training Equipment/Training Devices sustain high fidelity training and replaces equipment beyond economical repair or procures new equipment. Funds procure Submarine High Risk Trainer subsystems to meet requirements for Submarine Ship Control Operator Trainers (SCOT), Fire Fighting Trainers, Pressurized Submarine Escape Trainers and Damage Control Wet Trainers. This line also provides configuration changes for the Submarine Multipurpose Reconfigurable Training System (MRTS). The MRTS/MRTS 3D family includes VA CLASS Torpedo Room, Emergency Diesel Generator, Weapons Launch Console Team Trainer, VISIT and C4I Radio Room trainers. These training systems and TECs are identified by the Submarine Learning Center (SLC) and approved by the Fleet Type Commanders, for use at the Submarine Training Facilities.</p> <p>[P40A / TD200 ENGINEERING TRAINERS]: This line procures and installs Nuclear Propulsion Plant Fleet Interactive Display Equipment (FIDE) trainers, Virtual Interactive Display Equipment (VIDE) trainers, Virtual Fleet Training Devices, Basic Maintenance Course, Training Enhancement Changes (TECs), Multipurpose Reconfigurable Training Systems and other Navy Engineering Training devices for use at the Submarine Training Facilities. FIDE is required by NAVSEA 08 to provide advanced shore-based nuclear operator training. FIDEs support multiple ship classes and configurations at seven different geographic</p>												

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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 04: Ordnance Support Equipment / BSA 7: Other Expendable Ordnance		P-1 Line Item Number / Title: 5661 / Submarine Training Device Mods
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		
sites and Portsmouth Naval Shipyard, each requiring different levels of installation work. These training systems and TECs are identified by the Submarine Learning Center (SLC) and approved by the Fleet Type Commanders, for use at the Submarine Training Facilities.		
[P40A / TD 300 NAVIGATION TRAINERS]: Navigation Safety of Ship Trainer line procures Submarine Fleet and Team Navigation training devices which emulate surfaced and submerged Submarine characteristics. Navigation training systems include, but are not limited to: Virtual Reality Submarine (VRSUB), Submarine Piloting and Navigation Trainers (SPAN), Reconfigurable SPAN (RSPAN), Submarine Bridge Trainer/Integrated SPAN (SBT/ISPAN) and associated upgrades to all Homeports, Navigation Databases, Periscope Simulation (PSIM), Harbor Databases, Electronic Chart Display and Information Systems-Navy (ECDIS-N), Automated Information System (AIS) and PC-based Team Trainers including MiniSPANs and Voyage Management Systems (VMS) Labs. Single Story Bridge Trainers (LED Panel Rings) will be procured for Homeports in lieu of a MILCON project as applicable to Submarine Training Facilities space limitations. The SBT/ISPAN is comprised of Virtual Tactical, Beam Forming Sonar Simulation Trainer (VTAC-BSST), Voyage Management System (VMS), ECDIS-N, RADAR Simulation, Navigation Aids, Periscope Simulation (PSIM), and Harbor Databases. These training systems and Training Enhancement Changes (TECs) are identified by the Submarine Learning Center (SLC) and approved by the Fleet Type Commanders, for use at the Submarine Training Facilities.		
[P40A / TD 400 COMBAT CONTROL ACOUSTIC TRAINERS]: This line procures Submarine Common Operational Analysis and Employment Trainer (COAET) fundamental and employment skill level, Sonar Employment Trainer (SET) and Beam Forming Sonar Simulation Trainers (BSST). These trainers provide the acoustic operator employment skills and team training for fleet requirements. Funds also provide for TECs, Virtualized Tactical Control (VTAC), Periscope Simulation (PSIM), Submarine Skills Network (SUBSKILLSNET), Weapons Control, Mission Payload Control, Advanced Processing Build (APB)/ Technical Insertion (TI),and Sonar Tactical Decision Aid (STDA) implementation. The Sonar Employment Trainer (SET) provides acoustic operator employment Fleet and team training for submarine sonar systems. SET is used to train advanced operators in the Advanced Sonar Employment and Sonar Supervisor courses. The SET is periodically upgraded to support current software Advanced Processor Builds (APBs) and Technical Insertions (TIs). Live Signal Playback capability is provided from this line for the SET, COAET and Multi-Purpose Interactive Trainer (MIT) with Submarine Training And Tactics Unified Schoolhouse (STRATUS) to support distance training. COAET provides operator and introductory team training to submarine force personnel prior to entry into the Submarine Multi Mission Team Trainer (SMMTT) as well as supplemental training to off-load the heavily utilized submarine attack center trainers. COAET utilizes partial tactical builds and emulations of the latest Sonar, Combat Control, Imaging and Electronic Warfare Systems which provide an environment substantially equivalent to that found on board ship, thus enabling students to develop and maintain the attack center expertise necessary to support Fleet operations. COAET supports individual operator/pipeline training at the Submarine Training Facilities. These training systems and Training Enhancement Changes (TECs) are identified by the Submarine Learning Center (SLC) and approved by the Fleet Type Commanders, for use at the Submarine Training Facilities.		
[P40A / TD 500 ATTACK CENTER TRAINERS]: SUBMARINE MULTI MISSION TEAM TRAINER (SMMTT) line procures shore based Combat System Team Trainers capable of training personnel in all aspects of submarine approach, attack and surveillance operations in a controlled, simulated environment to achieve submarine force readiness levels. The requirement is to match the shore based configuration to the fleet modernized Hardware/Software(HW/SW) tactical builds. This includes the required capability to connect Attack Centers internally or with STRATUS for dual crew training on Cooperative Engagement, Undersea Battle Problems and Extended Battle Problems as directed by the Fleet and the Aggressor Squadron. SMMTT trainer supports operator, employment, strike, and Battle Group training for enlisted and officer pipelines. SMMTT supports SSN/SSGN/SSBN crew certification and Fleet Responsive Training. SMMTT integrates the Combat Control system (CCS) AN BYG-1 and Acoustic Rapid Cots Insertion (ARCI) AN/BQQ-10 tactical hardware and software builds with the All World Environment Simulation to provide realistic simulation using Authorized Navy databases and programs. This line includes modifications to the functionality of the Periscope Simulator (PSIM) to provide common imaging training for submarine attack centers. This line also procures Electronic Surveillance Simulation Software. Submarine attack centers support real world recorded sensor data for playback in the training environment. This line also includes Engineering Production Model (EPM) to manage the additional TI/APB and Trainer Enhancement requirements as directed by the TYCOM. These training systems and Training Enhancement Changes (TECs) are identified by the Submarine Learning Center (SLC) and approved by the Fleet Type Commanders, for use at the Submarine Training Facilities.		
[P3A / Submarine Attack Center Modifications]: Submarine Attack Center Modifications line upgrades hardware, software and simulation to match current Fleet configurations.		

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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 04: Ordnance Support Equipment / BSA 7:  
Other Expendable Ordnance

P-1 Line Item Number / Title:  
5661 / Submarine Training Device Mods

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 Training	P-5a			- / 163.987	- / 64.390	- / 68.941	- / 65.072	- / -	- / 65.072
P-3a	1 / Submarine Attack Center Modifications (TBD)				- / 181.307	- / 11.423	- / 11.650	- / 11.882	- / 0.000	- / 11.882
P-40	Total Gross/Weapon System Cost				- / 345.294	- / 75.813	- / 80.591	- / 76.954	- / 0.000	- / 76.954

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 Training	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Submarine Attack Center Modifications (TBD)				- / 12.119	- / 12.360	- / 12.606	- / 12.858	- / 1.631	- / 267.836
P-40	Total Gross/Weapon System Cost				- / 80.983	- / 82.747	- / 84.365	- / 86.056	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:**

The FY2024 budget decreased to support Undersea Warfare requirements. The budget will allow us to meet fleet training needs and keep simulators aligned to the Submarine Modernization plan in each Homeport. The requirement for SSBN Safety of Ship Trainers decreased from two kits in FY2023 to one kit in FY2024 to meet the Fleet training needs.

TD300 NAVIGATION TRAINERS -

3.2 SSBN Safety of Ship Trainers - The requirement decreased from two SSBN Safety of Ship Trainer kits in FY2023 to one kit in FY2024 to meet the Fleet training needs.

TD400 COMBAT CONTROL ACOUSTIC TRAINERS -

4.1 Fleet Responsive Team Trainers - FY2024 procures two Common Operator Analysis Employment Trainers (COAET) and one Sonar Employment Trainer (SET) to support officer and enlisted pipeline training and Fleet responsive training. Supports TYCOM requirement for pipeline and accession training. FY2024 reduces the number of COAETs required at SSN Homeports as a result of the 688 Submarine consolidation efforts.

TD500 ATTACK CENTER TRAINERS -

5.3 SMMTT Tech Support - FY2024 increase due to the program increasing the fidelity of the ocean models to reflect Fleet training requirements. This effort increases the technical support required for current and future hardware/software support.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy																Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7								P-1 Line Item Number / Title: 5661 / Submarine Training Device Mods								Aggregated Items Title: Submarine Training				
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) TD 100 HM&E TRAINERS																				
1.1) HIGH RISK TRAINERS <sup>(1)(t)</sup>	A		855,500.00	2	1.711	872,500.00	2	1.745	1,794K	2	3.589	1,830K	2	3.660	-	-	-	1,830K	2	3.660
1.2) SUBMARINE TRAINING DEVICES <sup>(2)</sup>	A		-	-	20.882	-	-	1.631	-	-	1.663	-	-	1.696	-	-	-	-	-	1.696
1.3) SHIP CONTROL TRAINERS <sup>(3)(t)</sup>	A		1,092K	2	2.183	1,113K	2	2.226	1,135K	2	2.270	1,157K	2	2.314	-	-	-	1,157K	2	2.314
Subtotal: 1) TD 100 HM&E TRAINERS			-	-	24.776	-	-	5.602	-	-	7.522	-	-	7.670	-	-	-	-	-	7.670
2) TD200 ENGINEERING TRAINERS																				
2.1) FIDE <sup>(4)(t)</sup>	A		31,464K	1	31.464	3,608K	1	3.608	3,580K	1	3.580	3,623K	1	3.623	-	-	-	3,623K	1	3.623
2.2) VIRTUAL FLEET TRAINING DEVICES <sup>(5)(t)</sup>	A		8,471K	1	8.471	1,821K	1	1.821	1,857K	1	1.857	1,893K	1	1.893	-	-	-	1,893K	1	1.893
2.3) CURRICULA AND TRAINING MATERIALS <sup>(6)</sup>	A		-	-	-	-	-	0.550	-	-	0.816	-	-	0.832	-	-	-	-	-	0.832
Subtotal: 2) TD200 ENGINEERING TRAINERS			-	-	39.935	-	-	5.979	-	-	6.253	-	-	6.348	-	-	-	-	-	6.348
3) TD 300 NAVIGATION TRAINERS																				
3.1) NAVIGATION SAFETY OF SHIP TRAINERS <sup>(7)(t)</sup>	A		1,465K	5	7.323	3,734K	2	7.468	3,808K	2	7.616	3,884K	2	7.768	-	-	-	3,884K	2	7.768
3.2) SSBN SAFETY OF SHIP TRAINERS <sup>(8)(t)</sup>	A		2,302K	2	4.605	2,348K	2	4.697	2,366K	2	4.733	1,860K	1	1.860	-	-	-	1,860K	1	1.860
3.3) ENGINEERING SUPPORT <sup>(9)(t)</sup>	A		847,500.00	2	1.695	864,000.00	1	0.864	881,000.00	2	1.762	898,500.00	2	1.797	-	-	-	898,500.00	2	1.797
Subtotal: 3) TD 300 NAVIGATION TRAINERS			-	-	13.623	-	-	13.029	-	-	14.111	-	-	11.425	-	-	-	-	-	11.425
4) TD 400 COMBAT CONTROL ACOUSTIC TRAINERS																				
4.1) FLEET RESPONSIVE TEAM TRAINERS <sup>(10)(t)</sup>	A		1,220K	4	4.879	1,233K	5	6.166	1,258K	5	6.289	1,283K	3	3.848	-	-	-	1,283K	3	3.848
4.2) ENGINEERING TECH SUPPORT <sup>(11)</sup>	A		-	-	-	-	-	0.706	-	-	0.720	-	-	0.734	-	-	-	-	-	0.734
Subtotal: 4) TD 400 COMBAT CONTROL ACOUSTIC TRAINERS			-	-	4.879	-	-	6.872	-	-	7.009	-	-	4.582	-	-	-	-	-	4.582
5) TD 500 ATTACK CENTER TRAINERS																				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy																Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7							P-1 Line Item Number / Title: 5661 / Submarine Training Device Mods							Aggregated Items Title: Submarine Training						
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) SUBMARINE ATTACK CENTERS (12)(t)	A		5,673K	4	22.692	5,786K	4	23.144	5,902K	4	23.606	6,019K	4	24.076	-	-	-	6,019K	4	24.076
5.2) SSBN, SSGN, SSN EPM (13)(t)	A		3,545K	1	3.545	3,616K	2	7.231	3,688K	2	7.375	3,761K	2	7.522	-	-	-	3,761K	2	7.522
5.3) SMMTT TECH SUPPORT (14)	A		-	-	54.537	-	-	2.533	-	-	3.065	-	-	3.449	-	-	-	-	-	3.449
Subtotal: 5) TD 500 ATTACK CENTER TRAINERS			-	-	80.774	-	-	32.908	-	-	34.046	-	-	35.047	-	-	-	-	-	35.047
Total			-	-	163.987	-	-	64.390	-	-	68.941	-	-	65.072	-	-	-	-	-	65.072

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 High Risk Trainers - FY2024 funding supports procurement of two Firefighting Trainer equipment suites in order to meet Fleet training requirements.

(2) 1.2 Submarine Training Devices - FY2024 procures Atmosphere Control Equipment upgrades to the simulator and Instructor Operator Station.

(3) 1.3 Ship Control Trainers - FY2024 procures two SSBN Ship Control Operator Trainer Technical Refreshes. TYCOM Requirement.

(4) 2.1 FIDE - FY2024 procures Submarine Basic Maintenance and FIDE training laboratories and training devices required to support Nuclear Maintenance and operator training. Includes site survey, site preparation, modernization and trainer delivery for S6G, S8G, S9G, A4W, A1B and CVN77 Nuclear Power Operator Trainers. SEA08/TYCOM requirement.

(5) 2.2 Virtual Fleet Training Devices - FY2024 procures a Virtual Fleet Training Device including a training laboratory and training equipment required to support virtual reality and augmented reality Fleet training. Includes site survey, site preparation, modernization and trainer delivery. TYCOM requirement.

(6) 2.3 Curricula and Training Materials - FY2024 procures curricula and training support materials for NAVSEA cognizant technical training courses of instruction. TYCOM requirement.

(7) 3.1 Navigation Safety of Ship Trainers- FY2024 procures LED Ring and Integrated Ships Piloting and Navigation Trainers upgrades for Navigation Training in Guam. TYCOM requirement.

(8) 3.2 SSBN Safety of Ship Trainers - FY2024 requirement decreases from two SSBN Safety of Ship Trainer kits in FY2023 to one kit in FY2024 to meet the Fleet training needs for concurrent operations of SSBN and SSGN. TYCOM requirement.

(9) 3.3 Engineering Support - FY2024 procures engineering support and modernization for Submarine Navigation Training devices which directly supports the Navigation Trainer Requirements.

(10) 4.1 Fleet Responsive Team Trainers - FY2024 procures two Common Operator Analysis Employment Trainers (COAET) and one Sonar Employment Trainer (SET) to support officer and enlisted pipeline training and Fleet responsive training. Supports TYCOM requirement for pipeline and accession training. FY2024 reduces the number of COAETs required at SSN Homeports as a result of the 688 Submarine consolidation efforts.

(11) 4.2 Engineering Tech Support - FY2024 funds Cyber Security, Multi-Purpose Interactive Trainer(MIT) and Submarine Training And Tactics Unified Schoolhouse (STRATUS) engineering support.

(12) 5.1 Submarine Attack Centers- FY2024 procures four Submarine Attack Center modernization efforts to include procurements related to TI/APB modernization hardware and software for SSN/SSBN/SSGN submarine attack centers. One attack center per quarter will be assembled and delivered per TYCOM approved Trainer modernization plan. These trainers are required to match trainer configuration with Tactical Fleet configuration to enable new capabilities in the Submarine Attack Centers. Trainers support crew certification, pre-deployment training, Undersea Battle Problems and Extended Battle Problems as directed by the Fleet and the Aggressor Squadron. Trainers are critical to Fleet readiness to ensure warfighters train ashore with the modernized combat, payload, acoustic, imaging, and electronic warfare systems. TYCOM requirement.

(13) 5.2 SSBN, SSGN, SSN EPM - FY2024 procures two Engineering Production Models at the Warfare Centers. This effort is critical to trainer lifecycle support, engineering changes and updates without disruption of training at the Submarine Training Facilities. Includes 688, VA, SSGN and SSBN EPMs in accordance with TYCOM approved Program of Record.

(14) 5.3 SMMTT Tech Support - FY2024 increase due to the program increasing the fidelity of the ocean models to reflect Fleet training requirements. This effort increases the technical support required for current and future hardware/software support.

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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy									Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					Aggregated Items:			
1810N / 04 / 7				5661 / Submarine Training Device Mods					Submarine Training			
Item Number / Title [DODIC]	O C O	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
<b>1) TD 100 HM&amp;E TRAINERS</b>												
1.1) HIGH RISK TRAINERS <sup>(1)</sup>		2021	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2020	Apr 2021	2	855,500.00	Y		
1.1) HIGH RISK TRAINERS <sup>(1)</sup>		2022	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Mar 2022	Sep 2022	2	872,500.00	Y		
1.1) HIGH RISK TRAINERS <sup>(1)</sup>		2023	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2022	Apr 2023	2	1,794K	N	Oct 2022	
1.1) HIGH RISK TRAINERS <sup>(1)</sup>		2024	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2023	Apr 2024	2	1,830K	N	Oct 2023	
1.3) SHIP CONTROL TRAINERS <sup>(3)</sup>		2021	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2020	Apr 2021	2	1,092K	Y		
1.3) SHIP CONTROL TRAINERS <sup>(3)</sup>		2022	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Feb 2022	Aug 2022	2	1,113K	Y		
1.3) SHIP CONTROL TRAINERS <sup>(3)</sup>		2023	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2022	Apr 2023	2	1,135K	N	Oct 2022	
1.3) SHIP CONTROL TRAINERS <sup>(3)</sup>		2024	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2023	Apr 2024	2	1,157K	N	Oct 2023	
<b>2) TD200 ENGINEERING TRAINERS</b>												
2.1) FIDE <sup>(4)</sup>		2021	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2020	Apr 2021	1	3,538K	Y		
2.1) FIDE <sup>(4)</sup>		2022	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Apr 2022	Oct 2022	1	3,608K	Y		
2.1) FIDE <sup>(4)</sup>		2023	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2022	Apr 2023	1	3,580K	N	Oct 2022	
2.1) FIDE <sup>(4)</sup>		2024	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2023	Apr 2024	1	3,623K	N	Oct 2023	
2.2) VIRTUAL FLEET TRAINING DEVICES <sup>(5)</sup>		2021	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2020	Jul 2021	1	1,786K	Y		
2.2) VIRTUAL FLEET TRAINING DEVICES <sup>(5)</sup>		2022	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Mar 2022	Sep 2022	1	1,821K	Y		
2.2) VIRTUAL FLEET TRAINING DEVICES <sup>(5)</sup>		2023	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2022	Apr 2023	1	1,857K	N	Oct 2022	
2.2) VIRTUAL FLEET TRAINING DEVICES <sup>(5)</sup>		2024	ELECTRIC BOAT / NEW LONDON	C / CPFF	** NO PCO **	Oct 2023	Apr 2024	1	1,893K	N	Oct 2023	
<b>3) TD 300 NAVIGATION TRAINERS</b>												
3.1) NAVIGATION SAFETY OF SHIP TRAINERS <sup>(7)</sup>		2021	NUWC NPT / NEWPORT, RI/CD	C / CPFF	** NO PCO **	Oct 2020	Apr 2022	2	3,662K	Y		Jan 2020
3.1) NAVIGATION SAFETY OF SHIP TRAINERS <sup>(7)</sup>		2022	NUWC NPT / NEWPORT, RI/CD	C / CPFF	** NO PCO **	Jun 2022	Dec 2023	2	3,734K	Y		Mar 2022
3.1) NAVIGATION SAFETY OF SHIP TRAINERS <sup>(7)</sup>		2023	NUWC NPT / NEWPORT, RI/CD	C / TBD	** NO PCO **	Oct 2022	Apr 2024	2	3,808K	N	Oct 2022	



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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy									Date: March 2023			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7				P-1 Line Item Number / Title: 5661 / Submarine Training Device Mods					Aggregated Items: Submarine Training			
Item Number / Title [DODIC]	O C O	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) NAVIGATION SAFETY OF SHIP TRAINERS <sup>(7)</sup>		2024	NUWC NPT / NEWPORT, RI/CD	C / TBD	** NO PCO **	Oct 2023	Apr 2025	2	3,884K	N	Oct 2023	
3.2) SSBN SAFETY OF SHIP TRAINERS <sup>(8)</sup>		2021	NUWC NPT / NEWPORT, RI/CD	C / CPFF	** NO PCO **	Sep 2021	Mar 2023	2	2,302K	Y		Jan 2020
3.2) SSBN SAFETY OF SHIP TRAINERS <sup>(8)</sup>		2022	NUWC NPT / NEWPORT, RI/CD	C / CPFF	** NO PCO **	Jun 2022	Dec 2023	2	2,348K	Y		Jan 2021
3.2) SSBN SAFETY OF SHIP TRAINERS <sup>(8)</sup>		2023	NUWC NPT / NEWPORT, RI/CD	TBD	** NO PCO **	Oct 2022	Apr 2024	2	2,366K	N	Oct 2022	
3.2) SSBN SAFETY OF SHIP TRAINERS <sup>(8)</sup>		2024	NUWC NPT / NEWPORT, RI/CD	C / TBD	** NO PCO **	Oct 2023	Apr 2025	1	1,860K	N	Oct 2023	
3.3) ENGINEERING SUPPORT <sup>(9)</sup>		2021	NUWC NPT / NEWPORT, RI/CD	C / CPFF	** NO PCO **	Oct 2020	Apr 2022	2	847,500.00	Y		
3.3) ENGINEERING SUPPORT <sup>(9)</sup>		2022	NUWC NPT / NEWPORT, RI/CD	C / CPFF	** NO PCO **	Feb 2022	Aug 2023	1	864,000.00	Y		
3.3) ENGINEERING SUPPORT <sup>(9)</sup>		2023	NUWC NPT / NEWPORT, RI/CD	C / TBD	** NO PCO **	Oct 2022	Apr 2024	2	881,000.00	N	Oct 2022	
3.3) ENGINEERING SUPPORT <sup>(9)</sup>		2024	NUWC NPT / NEWPORT, RI/CD	C / TBD	** NO PCO **	Oct 2023	Apr 2025	2	898,500.00	N	Oct 2023	
4) TD 400 COMBAT CONTROL ACOUSTIC TRAINERS												
4.1) FLEET RESPONSIVE TEAM TRAINERS <sup>(10)</sup>		2021	NUWC NPT / NEWPORT, RI	C / CPFF	** NO PCO **	Oct 2020	Apr 2022	4	1,220K	Y		Jan 2020
4.1) FLEET RESPONSIVE TEAM TRAINERS <sup>(10)</sup>		2022	NUWC NPT / NEWPORT, RI	C / CPFF	** NO PCO **	Jun 2022	Dec 2023	5	1,233K	Y		Mar 2022
4.1) FLEET RESPONSIVE TEAM TRAINERS <sup>(10)</sup>		2023	NUWC NPT / NEWPORT, RI	C / TBD	** NO PCO **	Oct 2022	Apr 2024	5	1,258K	N	Oct 2022	
4.1) FLEET RESPONSIVE TEAM TRAINERS <sup>(10)</sup>		2024	NUWC NPT / NEWPORT, RI	C / TBD	** NO PCO **	Oct 2023	Apr 2025	3	1,283K	N	Oct 2023	
5) TD 500 ATTACK CENTER TRAINERS												
5.1) SUBMARINE ATTACK CENTERS <sup>(12)</sup>		2021	NSWC CD / BETHESDA, MD	C / CPFF	** NO PCO **	Mar 2021	Jul 2022	4	5,673K	Y		Jan 2020
5.1) SUBMARINE ATTACK CENTERS <sup>(12)</sup>		2022	NSWC CD / BETHESDA, MD	C / CPFF	** NO PCO **	Jun 2022	Jul 2023	4	5,786K	Y		Mar 2022
5.1) SUBMARINE ATTACK CENTERS <sup>(12)</sup>		2023	NSWC CD / BETHESDA, MD	C / TBD	** NO PCO **	Jan 2023	Jul 2024	4	5,902K	N	Oct 2023	
5.1) SUBMARINE ATTACK CENTERS <sup>(12)</sup>		2024	NSWC CD / BETHESDA, MD	C / TBD	** NO PCO **	Jan 2024	Jul 2025	4	6,019K	N	Oct 2024	
5.2) SSBN, SSGN, SSN EPM <sup>(13)</sup>		2021	NUWC NPT / NEWPORT, RI	C / CPFF	** NO PCO **	Oct 2020	Apr 2022	1	3,545K	Y		Jan 2020

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Exhibit P-5a, Procurement History and Planning: PB 2024 Navy								Date: March 2023				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7				P-1 Line Item Number / Title: 5661 / Submarine Training Device Mods				Aggregated Items: Submarine Training				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
5.2) SSBN, SSGN, SSN EPM <sup>(13)</sup>		2022	NUWC NPT / NEWPORT, RI	C / CPFF	** NO PCO **	Jan 2022	Apr 2023	2	3,616K	Y		Jan 2021
5.2) SSBN, SSGN, SSN EPM <sup>(13)</sup>		2023	NUWC NPT / NEWPORT, RI	C / TBD	** NO PCO **	Oct 2022	Apr 2024	2	3,688K	N	Oct 2022	
5.2) SSBN, SSGN, SSN EPM <sup>(13)</sup>		2024	NUWC NPT / NEWPORT, RI	C / TBD	** NO PCO **	Oct 2023	Apr 2025	2	3,761K	N	Oct 2023	

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Exhibit P-3a, Individual Modification: PB 2024 Navy										Date: March 2023		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7				P-1 Line Item Number / Title: 5661 / Submarine Training Device Mods						Modification Number / Title: 1 / Submarine Attack Center 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)	181.307	11.423	11.650	11.882	0.000	11.882	12.119	12.360	12.606	12.858	1.631	267.836
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	181.307	11.423	11.650	11.882	0.000	11.882	12.119	12.360	12.606	12.858	1.631	267.836
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	181.307	11.423	11.650	11.882	0.000	11.882	12.119	12.360	12.606	12.858	1.631	267.836
(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:**  
Submarine Attack Center Modifications line upgrades hardware, software and simulation to match current Fleet configurations.

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Exhibit P-3a, Individual Modification: PB 2024 Navy								Date: March 2023							
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7				P-1 Line Item Number / Title: 5661 / Submarine Training Device Mods						Modification Number / Title: 1 / Submarine Attack Center Modifications					
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:							
Models of Systems Affected: Submarine Attack Center Modifications supporting SMMTT procurements and deliveries.				Modification Type: TBD						Related RDT&E PEs: 0604558N					
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: Submarine Attack Center Modifications															
B Kits															
Recurring															
1.1.1) Submarine Attack Center Modifications - NonOrganic		55 / 173.933	4 / 10.619	4 / 10.830	4 / 11.046	- / -	4 / 11.046	4 / 11.266	4 / 11.491	4 / 11.720	4 / 11.954	- / -	83 / 252.859		
Subtotal: Recurring		- / 173.933	- / 10.619	- / 10.830	- / 11.046	- / -	- / 11.046	- / 11.266	- / 11.491	- / 11.720	- / 11.954	- / 0.000	- / 252.859		
Subtotal: Submarine Attack Center Modifications		55 / 173.933	4 / 10.619	4 / 10.830	4 / 11.046	- / -	4 / 11.046	4 / 11.266	4 / 11.491	4 / 11.720	4 / 11.954	- / -	83 / 252.859		
Subtotal: Procurement, All Modification Items		- / 173.933	- / 10.619	- / 10.830	- / 11.046	- / -	- / 11.046	- / 11.266	- / 11.491	- / 11.720	- / 11.954	- / 0.000	- / 252.859		
Installation															
Modification Item 1 of 1: Submarine Attack Center Modifications		- / 7.374	- / 0.804	- / 0.820	- / 0.836	- / 0.000	- / 0.836	- / 0.853	- / 0.869	- / 0.886	- / 0.904	- / 1.631	- / 14.977		
Subtotal: Installation		- / 7.374	- / 0.804	- / 0.820	- / 0.836	- / -	- / 0.836	- / 0.853	- / 0.869	- / 0.886	- / 0.904	- / 1.631	- / 14.977		
Total															
Total Cost (Procurement + Support + Installation)		181.307	11.423	11.650	11.882	0.000	11.882	12.119	12.360	12.606	12.858	1.631	267.836		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023																					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7										<b>P-1 Line Item Number / Title:</b> 5661 / Submarine Training Device Mods										<b>Modification Number / Title:</b> 1 / Submarine Attack Center Modifications											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :															<b>MDAP/MAIS Code:</b>																
<b>Modification Item 1 of 1:</b> Submarine Attack Center Modifications																															
<b>Manufacturer Information</b>																															
Manufacturer Name: NSWC CD/NUWC NPT <sup>(15)</sup>															Manufacturer Location: BETHESDA, MD/ NEWPORT, RI																
Administrative Leadtime (in Months): 4															Production Leadtime (in Months): 19																
<b>Dates</b>		<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>					
Contract Dates		Jan 2022				Jan 2023				Jan 2024				Jan 2025				Jan 2026				Jan 2027				Jan 2028					
Delivery Dates		Jul 2023				Jul 2024				Jul 2025				Jul 2026				Jul 2027				Jul 2028				Jul 2029					
<b>Installation Information</b>																															
<b>Method of Implementation:</b> AIT:: Installation Name: Submarine Attack Center Modifications																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>		<b>FY 2025</b>		<b>FY 2026</b>		<b>FY 2027</b>		<b>FY 2028</b>		<b>To Complete</b>		<b>Total</b>							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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		49 / 7.374		3 / 0.804		3 / 0.615		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		55 / 8.793					
FY 2022		- / -		- / -		1 / 0.205		3 / 0.627		0 / 0.000		3 / 0.627		- / -		- / -		- / -		- / -		- / -		0 / 0.000		4 / 0.832					
FY 2023		- / -		- / -		- / -		1 / 0.209		0 / 0.000		1 / 0.209		3 / 0.644		- / -		- / -		- / -		- / -		0 / 0.000		4 / 0.853					
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.209		3 / 0.656		- / -		- / -		- / -		0 / 0.000		4 / 0.865					
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.213		3 / 0.669		- / -		- / -		0 / 0.000		4 / 0.882					
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.217		3 / 0.683		0 / 0.000		4 / 0.900							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 0.221		3 / 0.696		4 / 0.917							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		4 / 0.935		4 / 0.935							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -					
Total		49 / 7.374		3 / 0.804		4 / 0.820		4 / 0.836		0 / 0.000		4 / 0.836		4 / 0.853		4 / 0.869		4 / 0.886		4 / 0.904		7 / 1.631		83 / 14.977							
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	49	-	2	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	83
Out	49	-	2	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	83
<b>Footnotes:</b>																															
<sup>(15)</sup> NSWC CD & NUWC NPT are collaborating warfare centers that manage and execute the Submarine Attack Center Modifications as directed by NAVSEA. Both warfare centers function as a prime for this effort. However, for cost efficiency purposes, they compete their cognizant tasks among multiple vendors with multiple orders to provide equipment/software in a timely manner to meet the fleet required training dates. The Submarine Attack Center delivery is not linked to any single contract date.																															

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 7: Other Expendable Ordnance							<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> 0204112N				<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> 223												
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	681.308	135.814	203.695	209.487	0.000	209.487	153.240	204.646	182.536	183.948	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	681.308	135.814	203.695	209.487	0.000	209.487	153.240	204.646	182.536	183.948	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>681.308</b>	<b>135.814</b>	<b>203.695</b>	<b>209.487</b>	<b>0.000</b>	<b>209.487</b>	<b>153.240</b>	<b>204.646</b>	<b>182.536</b>	<b>183.948</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	2.805	0.864	2.482	-	2.482	0.904	1.494	2.439	1.374	Continuing	Continuing
Flyaway Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<p><b>Description:</b></p> <p>This line provides funding to procure, modify, and upgrade training devices to keep them compatible with equivalent changes made to Fleet operational equipment. Funds ensure alignment between Surface Learning Centers and Fleet Concentration Area training systems and Fleet training requirements as dictated by the Surface and Expeditionary Warfare Training Plan.</p> <p>[P40A / SURFACE TRAINING ADVANCED VIRTUAL ENVIRONMENT (STAVE) SEAFRAME SIMULATORS]: STAVE-LCS SEAFRAME SIMULATORS - Funds procure and modernize Littoral Combat Ship (LCS) tactical training simulators and equipment for the respective LCS homeports located in Mayport, Florida and San Diego, California, and the Surface Warfare School Command (SWSC) in Newport, Rhode Island. Trainers are required for each LCS variant (Freedom and Independence) at each location. Throughput of LCS crews requires more than one simulator (3 training systems total) of each variant in a homeport. Simulators meet the Train to Qualify/ Train to Certify (T2Q/T2C) Key Performance Parameter (KPP) requirement of the Capabilities Development Document. Funding procures hardware and software associated with building the trainers and the installation of this hardware and software at the LCS Training Facilities (LTF) in each homeport and at SWSC enabling the increased throughput for ships/crew/ sailors supporting CNO approved BLUE GOLD Plus crewing strategy and directly supporting the revised training requirements of the Navy's Comprehensive Review. This procurement enables ship Commanding Officers to witness watch stander crew performance under high-stress conditions given realistic at sea scenarios in the synthetic environment.</p> <p>1.1) STAVE-LCS Network Virtual Reality Labs &amp; Networks and Modernization - Funds comprehensive network infrastructure, computing environment and Virtual Reality Labs (VRLs) within the LCS Training Facilities (LTF) to support delivery and management of all components of LCS watch stander training. This modernization enables enhanced warfighter scenario training for the LCS crews in Combat Systems qualifications and ship systems troubleshooting through the virtual network. Both LTFs are designed around a central computer server farm (backbone) that houses all courseware, training scenarios, and student records. Without the STAVE infrastructure, there is no way to distribute the required courseware and software around the LTF. Without the VRLs, there is no method of presenting STAVE courseware to students. Modernization efforts include regular/scheduled updates/upgrades to the STAVE and include procurement of new servers, relays, and switches, along with the procurement of new and/or updated Virtual Reality Lab (electronic classroom) equipment supporting increased crew throughput as additional LCS ships are commissioned.</p> <p>1.2) STAVE-LCS Mission Bay Trainers &amp; Modernization - Enable the qualification, training, and team certification of the individuals and teams deploying the LCS main battery - Mission Packages (MP). Live scenarios include prepping and launching/recovering of multi-ton mission module off-hull remote vehicles and operating of the internal cranes, doors, and other associated equipment in the Mission Bay. Modernizations provide updated MP deployment and recovery capability for enhanced warfighting readiness the individual full-scale replicas of the Mission Bay for both variants. Without the Mission Bay Trainer, there will be no realistic controlled scenario homeport training in the Mission Bay operations for the San Diego or Mayport-based crews and detachments during training pipeline, or off-hull, rapid refresh crew team training. No funding was provided in FY21 due to a \$9M budget cut. \$6.3M was provided in FY22 for an MBT Tech Refresh and to add Unmanned Influence Sweep System (UISS) capability. FY24 funding is a slight increase over FY23 due to increased material and labor costs.</p>												

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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 04: Ordnance Support Equipment / BSA 7: Other Expendable Ordnance		P-1 Line Item Number / Title: 5664 / Surface Training Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204112N	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 223		
<p>1.3) STAVE-LCS Integrated Tactical Trainers &amp; ITT Modernization - These are full scale simulators of the Tactical Systems enabling, initial, proficiency, integrated team training of Bridge, Combat Systems, Engineering, and Mission Package systems/watch stations. The ITT delivers Detect to Engage sequencing of ships Combat Systems and developing watch stander Command and Control for our future Navy warfighters. The quantity and type (based on variant) of trainers in San Diego and Mayport is dependent on the Navy's Strategic Laydown of the Littoral Combat Ships. Modernization to the ITT's enable ships baseline upgrades and realistic combat scenarios compatible with individual crew Combat System baseline to prepare crews for Battle Force training. Without the ITTs, there is no way for the LCS crews and detachments to train in-port, as the LCS ships do not have an onboard training system requirement. Ships would have to train underway utilizing real targets and other Fleet assets, such as drones, and commercial air services to accomplish required qualifications and certifications for all their training. The LCS Concept of Operations does not support such at-sea intensive training requirements. FY24 funding had decreased from the \$38M that was provided in FY23 to perform a Lethality and Survivability upgrade for ITT2A located in San Diego, CA.</p> <p>1.4) STAVE-LCS Bridge Trainers and Modernization -Devices that permit selected aspects of Bridge tasks (including Readiness Control Officer [RCO] tasks) to be practiced independently of Combat Systems Operations as found in more capable ITTs. This facilitates more efficient accomplishment of T2Q and T2C objectives. This trainer supports Officer training pipeline at SWCS, Newport in support of Division Officer, Department Head, and PXO/PCO training pipeline for Officer of the Deck Training and rapid refresh and skills enhancement in Mayport and San Diego. FY24 funding has decreased from FY23 since no new training system deliveries or upgrades are planned for FY24.</p> <p>1.5) STAVE-LCS Combat Systems Virtual Operations Trainer (CS VOT)(LCS 1 and LCS 2) - These devices permit training in selected aspects of Combat Systems Operations to support individual skills development and practice. The CS VOTs located in Newport, Rhode Island, support Tactical Action Officer (TAO) training and qualification. Increased funding in FY24 supports upgrades to the current trainers to achieve capability alignment with LCS5/6 and follow.</p> <p>1.6) STAVE-LCS Courseware - Interactive courseware set in a virtual ship environment and completed by students utilizing Virtual Reality Labs. This courseware supports the majority of classroom training for LCS watch stations including Engineering Plant Technician (EPT), Readiness Control Officer (RCO), as well as Combat Systems and IT watch stations and is an essential element of T2Q/T2C for LCS Sailors. Funding increase in FY24 is for procurement of virtual courseware for the SPS-80 radar, which is currently not in existing courseware.</p> <p>1.7) STAVE-LCS Surface Warfare Mission Module Training - New requirements for Surface-to-Surface Missile Module (SSMM) operations, maintenance and weapons loading training, update to existing Mk50 Gun Weapons course (A-041-0005) and update to Mission Module Common Skills course (A-250-0022).</p> <p>1.8) Engineering Development Model for LCS Training Devices - New requirement, the training systems at the LTFs are at risk due to not having a dedicated Engineering Development Model (EDM) for testing vulnerability patches and other software upgrades in an isolated and sanitized environment to determine the impact prior to implementation on training systems. Currently patches and software updates are installed and tested on the actual training devices resulting in loss of trainer availability and delays in restoration of the trainer if functionality is impacted. FY24 is the first year of funding.</p> <p>1.9) Outfitting for new LCS Support Facility in Mayport, FL - New requirement for initial outfitting of spaces in building P-426, Mayport. The facility will accommodate Littoral Combat Ship Squadron (LCSRON) Command staff, classrooms, operation watch floor, storage, administrative, office space, video teleconference (VTC), conference rooms, auditorium and crew lounge areas to support the Littoral Combat Ship (LCS) mission.</p> <p>[P40A / STAVE-LCS Virtual Reality Labs, Networks &amp; Modernization]: Funds provided for modernization efforts which include regular/scheduled updates/upgrades to the computer network and include procurement of new servers, relays, and switches, along with the procurement of replacement computers, monitors, keyboards, and other peripheral equipment to support increased crew throughput as additional LCS ships are delivered.</p> <p>[P40A / STAVE-LCS Mission Bay Trainers &amp; Modernization]: Funding supports the Engineering and procurement effort for the upgrade of the Mission Bay Trainers (MBT) to align with ship capabilities being delivered by PMS420 and to support training for Knifefish and Unmanned Influence Sweep System (UISS).</p> <p>[P40A / STAVE-LCS Integrated Tactics Trainer (ITT) Modernization]: Funding increase in STAVE-LCS integrated Tactical Trainer (ITT) Modernization is driven by accomplishment of a Lethality and Survivability for ITT 2A.</p>		



# UNCLASSIFIED

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Line Item MDAP/MAIS Code: 223		
<p>[P40A / STAVE - LCS Courseware]: Funding provided for new courses for systems without current STAVE courseware.</p> <p>[P40A / STAVE - LCS Surface Warfare Mission Module Training]: Funding is provided to complete the procurement of Maritime Security Module (MSM) training devices.</p> <p>[P40A / Outfitting for new LCSRON Support Facility in Mayport, FL]: Funds provided for the necessary Computers, Audio/Visual display systems to operate and provide the support necessary for the sailors and mission for the minimally manned LCS.</p> <p>[P40A / MB040 - Combined IAMD/ASW Trainer (CIAT)]: Funds support updates to the Combined Integrated Air and Missile Defense (IAMD) and Anti-Submarine Warfare (ASW) Trainer (CIAT) to establish a foundation for bringing this capability to AEGIS and Anti-Submarine Warfare (ASW) Baselines for ship integration to provide virtual, constructive (VC) training in a contested environment. Investment will enable 27 additional platforms to train to their ships capabilities in realistic environments against peer/near peer threats. This will provide foundation for high fidelity LVC capability at sea and enables needed training capability for Sailors to employ the weapon system against peer threats during AWT Phase II, and enables AEGIS Training and Readiness Command, as part of a larger strategy, to meet training production for Fire Controlman, Sonarman and Officers.Funds also include costs associated with tactical, Information Assurance, computer program procurements and patches to ensure alignment with DON CIO Cyber requirements and ship tactical modernization.</p> <p>[P40A / MB040 - Fleet Training Wholeness Strike Group CEC Training at Sea]: Investment modifies Cooperative Engagement Capability (CEC) to meet integrated CEC training requirements to include Naval Integrated Fire Control-Counter Air (NIFC-CA) Increment II capabilities to meet Strike Group Training Requirements by providing an at sea training capability for ~130 Aegis/SSDS ships. This line transitions to the Upgrade Kit line starting in FY25.</p> <p>[P40A / MB040 - Surface Advanced Virtual Environment (STAVE)]: Funding provides Surface Training Advanced Virtual Environment (STAVE) infrastructure for the procurement, delivery, installation and sustainment of distributed STAVE-CS hardware suites for maintainer training, procures STAVE-CS virtual operator labs, supporting over 10,000 students over the FYDP. Aggressive Fleet expansion and modernization plans for both Aegis, SSDS and SQQ-89 along with service life extension of the Fleet requires advanced distributed (via NCTE) training solutions to support increased throughput on complex concepts and capability. This requirement will provide increased student throughput, and gain efficiencies by enabling courses to be centrally conducted and distributed to remote classrooms located in fleet concentration areas.</p> <p>[P40A / MB040 - Live, Virtual, and Constructive (LVC) Training]: Fields an AEGIS and SSDS integrated ship and shore Live, Virtual, and Constructive (LVC) test and training architecture supporting all phases of training. Establishes tactically aligned training capabilities to field to the ship and shore training sites at a faster pace than current systems and processes allow. Enables Unit and Strike Group, in-port and at-sea high-end fight combat systems tactical training and debrief for Aegis and SSDS FFG, DDG, CG, Amphibs and Carriers. Funds procurement of Infrastructure as a Service (IaaS) ORDALT kits and software licenses for shore sites and to support virtualized training in schoolhouse systems.</p> <p>[P40A / CVN 78 Class Training Equipment]: This provides for several initiatives to develop training solutions for multiple mission critical CVN 78 Class Contractor Furnished Equipment (CFE) systems. Funds procure CVN78 Class training simulators and equipment for the Carrier Advanced Reconfigurable Training System (C-ARTS) to achieve Ready For Training (RFT). The CFE items procured include multiple training simulators, 3D printed training aids, ship system mock-ups, electronic classrooms, intelligent tutoring systems, and use of Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) training content necessary for installation at the C-ARTS training facilities. Simulators or advanced training systems are needed to meet warfighter mission and safety readiness requirements of the Naval Aviation Carrier Training Manual. Funding procures hardware and software associated with building the trainers' hardware and software for future installation at the applicable C-ARTS sites and Centers of Excellence in Norfolk, Great Lakes, and at SWOS Newport as designed. This funding represents initial training systems procurement for Advanced Weapons Elevators (AWEs), Machinery Control and Monitoring System (MCMS), Federated Machinery Local Area Network (FMLAN)/ Machinery Local Area Network (MLAN), Aircraft Landing and Recovery Equipment (ALRE) Jet Blast Deflector (JBD) Electromechanical Actuators, Emergency Diesel Generators (EDGs), Modular Refrigeration Units (MRU), Steering Gear Control Systems (SGCS), Zonal Electrical Distribution System (ZEDS), Vacuum Chemical Holding Tank (VCHT), Plasma Arc Waste Destruction System (PAWDS),Weapons Elevator and Stores Elevator Electromechanical Actuators (WESEEs) and their controllers, Aviation Fuel (JP-5) Management and Transfer System, Solid State Voltage and Frequency Converter (SSVFC), Advance Damage Control System (ADCS), Magazine Sprinkler System, Fiber Optic Cable Plant, Navigation Distribution System (NDS), Void Flooding and Damage Control Systems, Permanent Magnet Electromechanical Actuators (PMEMAs), Advanced Degaussing System (ADS), Voice and Video systems, Integrated Video and Voice Networks, and other systems that are</p>		

# UNCLASSIFIED

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Line Item MDAP/MAIS Code: 223		
<p>unique to CVN 78 Class Carriers. The Formal Life Cycle Training program provides training delivery for effective warfighter skills required for safe operations and maintenance of the ship. There is currently no schoolhouse established for any of these new CFE systems being introduced on the CVN 78 Class.</p> <p>[P40A / SSC Life Cycle Training System]: Funds support the Ship to Shore Connector (SSC) Life Cycle Training solution to include Operator and Maintainer training systems. Operator training includes Full Mission Trainers (FMTs), which are programmable simulators and are fundamental elements of SSC operator training, Advanced Electronic Classrooms, Static Trainers and associated curriculum. Maintainer training includes Training Aids, Mock-ups and associated curriculum. A new SSC Life Cycle Training solution is required because the existing LCAC training systems will not support SSC crew training based on significant configuration differences between SSC and LCAC. Note: This item was previously housed in LI 0970 and was moved to LI 5664.</p> <p>[P5 / TS004 Surface Training Device Mods]: This line provides funds to procure, modify and upgrade trainers to include Aegis Weapon Systems, Aegis Ashore, Littoral Combat Ship (LCS), DDG 1000, shore based Integrated Navigation, Seamanship and Ship-Handling Trainers (I-NSST), Ship Self Defense System (SSDS), AN/SQQ-89A(V)15 Anti-Submarine Warfare (ASW) Tactical Employment Trainer (ATET), North Atlantic Treaty Organization SEASPARROW Surface Missile Systems (NSSMS), and other Surface Warfare related individual and team Training Programs to include Navigation, Hull, Mechanical and Electrical (HM&amp;E), combat systems (CS), and Amphibious and Mine Warfare (AMW) Technical Training Equipment (TTE), Training Devices, Training Unique Equipment, Training systems, and the Surface Training Advanced Virtual Environment (STAVE). Funds provide for alignment with DON Chief Information Officer (CIO) Cyber requirements. STAVE methodology provides students with an immersive and interactive learning environment as well as hands-on training equipment as part of a blended solution, which accelerates learning, improves student performance, and supports both Department of the Navy (DON) High Velocity Learning and Ready Relevant Learning intent. Funds ensure alignment between Surface Learning Centers and Fleet Concentration Area training systems and fleet training requirements as dictated by the Surface and Expeditionary Warfare Training Plan (SEWTP). Additionally, funds support the creation of training system's critical design review (CDR) packages as well as the establishment and improvement of ship on-board training curriculum for the purpose of maintaining perishable operator and maintenance skills.</p> <p>[P5 / Navigation Trainers]: Funds are provided for modifications/upgrades to shore-based Navigation Trainers in support of the Surface Warfare Mariner Skills Training Program (MSTP). Funding addresses navigation shortfalls identified during CNO-directed Comprehensive Review following the USS John S. McCain and USS Fitzgerald collisions and provides for procurement of new trainers and modifications/upgrades to shore based Navigation Trainers to support the modernization of all Surface Navigation, Seamanship, and Ship-handling Trainers (NSST) in all CONUS and OCONUS Fleet Concentration Areas as well as various schoolhouse locations, in support of the Surface Warfare Mariner Skills Training Program (MSTP). Modernization is critical to maintaining trainer service life and avoiding increased costs to maintain aging equipment. This will ensure all students have the necessary training devices, instructors and resources to execute the MSTP.</p> <p>[P5 / AEGIS Ashore Trainer/C4I/Tech Refresh]: Funds modernization, delivery, installation and life-cycle upgrades for a high fidelity Aegis Ashore Team Trainer in support of the land-based Aegis Ashore Training Continuum. Funds also provide for the integration of a C4I component, Ballistic Missile Defense (BMD) Upgrades, and tech refresh. Also funds the training facility to train Navy Sailors who will man European Phased Adaptive Approach (EPAA) land-based BMD facilities in Poland and Romania. The Aegis Ashore Team Trainer (AATT) at Dam Neck, VA will serve as the single site for individual watch team tactical training, certification events and sustainment training for Aegis Ashore rotational crews assigned to AA BMD Host Nation Sites. Funding also supports the In-Plant Support System (IPSS) for the AATT. The AATT in Dam Neck is the only means of training and certifying crews prior to arriving at their host nation site. As an alternative to funding a second AATT, this IPSS will allow for cybersecurity requirements and some maintenance to be conducted separate from the AATT, freeing time to train at the Dam Neck facility and supporting Poland coming online.</p> <p>[P5 / Combined IAMD/ASW Trainer (CIAT)]: Funds are provided to procure and install tactical and other software licensing (all baselines), Information Assurance and routine software and hardware modifications of Combined Integrated Air and Missile Defense (IAMD)/Anti-submarine Warfare (ASW) Trainer (CIAT) and Reconfigurable Combat Information Center (CIC) training (RCT) systems and ensures alignment with DON Chief Information Officer (CIO) Cyber requirements and tactical ship modernization.</p> <p>[P5 / Navy Training System Plan (NTSP TTE/TD Mods)]: Funds provided for procurement, installation, and upgrades for surface and expeditionary training systems in multiple Fleet Concentration Areas (FCA) in accordance with the results of DON directed and Fleet sponsored studies, NTSP updates, and Technical Training Audits. One of the key items identified in the Fleet Review Panel of Surface Force Readiness, LPD 17 Class Wholeness Task Force, Navigation Wholeness Study, Surface Engineering Training Wholeness Review, Littoral Combat Ship (LCS) Front End Analysis (FEA), DDG 1000 wholeness review, and LHD 8/ LHA 6 MPT analyses done by the Surface Warfare Enterprise was the outdated, or lack of, training equipment in the schoolhouses. Based on this analysis, funding supports requirements identified in approximately 80 Navy Training System Plan updates and 162 Technical Training Course Audits. This investment will be for the procurement and installation of Training Equipment at Learning Centers to keep training courses in alignment with current configuration of equipment in the fleet.</p> <p>Investment ensures Surface Warfare Training Continuums are capable of meeting training requirements directly supporting readiness for systems/courses, including the following:</p>		

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Line Item MDAP/MAIS Code: 223		
<div>1. Advanced Welding</div> <div>2. Diesel Engine C Schools</div> <div>3. 4160 High Voltage Electrical Safety Training</div> <div>4. Engineering Officer Schools</div> <div>5. Ultrasonic Inspector Training</div> <div>6. Senior Enlisted Engineering</div> <div>7. Engineering Maintenance Principles and Practices</div> <div>8. PA6B Diesel Engine Training</div> <div>9. Cryogenic Systems Training</div> <div>10. Hydraulic Systems and Components</div> <div>11. Advanced Shipboard Firefighting Training</div> <div>12. Machinery Repairman C Schools</div> <div>[P5 / Technical Training Equipment Modifications]: Funds provided for schoolhouse modifications, upgrades, and technology refreshes of end items in support of fleet training requirements including Hull Mechanical and Electrical (HM&amp;E), and combat systems technical training equipment (TTE) for the training activities. Provides equipment to augment existing TTE due to increased student throughput, replaces equipment beyond economical repair and procures new equipment.</div> <div>[P5 / STAVE-FFG 62 SEAFRAME SIMULATORS]: Funds provided for procurement of the Guided Missile Frigate (FFG 62) program tactical training simulators and equipment for respective FFG 62 homeports. Simulators meet the Train to Qualify/ Train to Certify / Train to Sustain (T2Q/T2C/T2S) Key Performance Parameter (KPP) requirement of the Capabilities Development Document. Funding supports single crew pipeline and Fleet Concentration Area training requirements through the first single-crewed deployments of FFG by procurement of hardware and software associated with existing surface trainers. This procurement enables ship Commanding Officers to witness watch stander crew performance under realistic at sea scenarios in a synthetic, shore-based environment.</div> <div>[P5 / SURFACE MINOR MODS]: Funds provided for modernization for training systems for surface and expeditionary training systems in accordance with the results of DON directed and Fleet sponsored studies. Specific studies of surface training systems include: Fleet Review Panel of Surface Force Readiness, Aegis Weapon System/SPY Radar Readiness Task Force, LPD 17 Class Wholeness Task Force, Navigation Wholeness Study, Surface Engineering Training Wholeness Review, Fleet Integrated Air and Missile Defense and Anti-Submarine Warfare Improvement Programs, Aegis Ashore, Naval Integrated Fire Control-Counter Air (NIFCCA) and C5I training requirements documents, Littoral Combat Ship (LCS) Front End Analysis (FEA), DDG 1000 wholeness review, LHD 8/ LHA 6 Front End Analysis (FEA), Commander Naval Surface Forces (CNSF) manpower initiatives impact on readiness, and the Navy Inspector General (IG) report on Computer Based Training (CBT). Surface Training Readiness Management Systems (STRMS) - procurement of hardware/software and implementation of the tracking system and incremental scaling/modification of each mission area competency, proficiency and associated Training and Readiness (T&amp;R) metric for comparison to Fleet requirements across all Cruiser/Destroyer (CRUDES) baselines. The extensive inventory of training systems to support 16 classes of ships requires continual modernization and modification to ensure alignment with fleet systems while addressing technology obsolescence issues. Funding is budgeted to modernize systems including the following:</div> <div>1. Damage Control Wet Trainers Upgrades/Refresh</div> <div>2. DDG 51 Machinery Control System Maintenance Trainer</div> <div>3. Electrical Maintenance Training</div> <div>4. Air Conditioning and Refrigeration (AC&amp;R) Maintenance Training</div> <div>5. Deck System Equipment Training</div> <div>6. Marine Sanitation Devices</div> <div>7. Firefighting Team Trainers Upgrades/Refresh</div> <div>8. Advanced Electronic Attack (EA)</div> <div>9. Anti-Submarine Warfare (ASW) Tactical Trainers to include ASW Tactical Employment Trainer (ATET).</div> <div>10. Elevator Systems</div> <div>11. Steam Maintenance Training</div>		

**UNCLASSIFIED**

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Line Item MDAP/MAIS Code: 223			
12. DDG 1000 Training Systems 13. Expeditionary Mobile Base (ESB) Training Systems 14. Landing Craft Utility (LCU) 1600/1700 Training Systems 15. Air Defense Strike Group Facility (ADSGF)/Integrated Training Facility (ITF) (Fallon, NV) 16. LCS Training Systems 17. Surface Training Readiness Management Systems (STRMS) 18. 7m Rigid Inflatable Boat (RIB) Training Systems 19. DDG 51 FLT III New Systems Training 20. Training systems for Gunner's Mate (GM), Fire Controlman (FC), Fire Controlman Aegis (FCA), Boatswain's Mate (BM), Interior Communications Technician (IC), Sonar Technician - Surface (STG), and Operations Specialist (OS) accession training 21. Air Intercept Control (AIC) Simulators			
[P5 / FFT/SLEP/MODULAR TRAINER]: Funds are provided for the Service Life Extension Program (SLEP) Firefighter Trainer (FFT). Trainers are located in Newport, Norfolk, Mayport, San Diego, Pearl Harbor, and Great Lakes, and are vital to ensuring the fleet's ability to utilize and employ shipboard systems.			
[P5 / FCA TRAINERS]: Funds are provided for upgrades to shore based trainers (Combat System, HM&E) in Fleet Concentration Areas, to include Multi-Mission Team Trainer upgrades.			
[P3A / MB040 - BFTT/ATD Ship Sets]: The Total Ship Training Capability (TSTC)/Advanced Training Domain (ATD)/ Battle Force Tactical Training (BFTT) family of systems provides realistic joint warfare training across the spectrum of armed conflict; realistic unit level team training in all warfare areas; a means to link ships together which are in different homeports for coordinated training; external stimulation of shipboard training systems; and simulation of non-shipboard forces. BFTT AN/USQ-T46 and ATD AN/USQ-T52/T52A are core components of the TSTC. Battle Force Tactical Training (BFTT) T46/T52 Ship set configurations vary depending on AEGIS or Ship Self Defense System (SSDS) installation. T46/T52's for SSDS include additional materials and units to be integrated for stimulation of the ships sensors.			
[P3A - 2 / MB040 BFTT/ATD/TSTC Upgrade Kits]: Upgrade Kits and interface upgrades implement Fleet prioritized warfighting training improvements to the Total Ship Training Capability (TSTC)/Battle Force Tactical Training (BFTT)/Advanced Training Domain (ATD) systems in order to meet evolving combat system capabilities. Training system improvements are a critical factor in achieving warfighter competencies and mission readiness. Unit costs are variable.			

## UNCLASSIFIED

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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 Ships Training Equipment				- / 193.413	- / 20.854	- / 121.081	- / 64.586	- / -	- / 64.586
P-5	1 / TS004 Surface Training Device Mods [TS004]				- / 372.429	- / 88.166	- / 53.543	- / 114.595	- / 0.000	- / 114.595
P-3a	1 / MB040 - BFTT/ATD Ship Sets (TBD)				- / 73.259	- / 13.000	- / 12.800	- / 13.800	- / 0.000	- / 13.800
P-3a	2 / MB040 BFTT/ATD/TSTC Upgrade Kits (TBD)				- / 42.207	- / 13.794	- / 16.271	- / 16.506	- / 0.000	- / 16.506
P-40	Total Gross/Weapon System Cost				- / 681.308	- / 135.814	- / 203.695	- / 209.487	- / 0.000	- / 209.487
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 Ships Training Equipment				- / -	- / -	- / -	- / -	- / -	- / -
P-5	1 / TS004 Surface Training Device Mods [TS004]				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / MB040 - BFTT/ATD Ship Sets (TBD)				- / 14.905	- / 15.000	- / 16.000	- / 16.225	Continuing	Continuing
P-3a	2 / MB040 BFTT/ATD/TSTC Upgrade Kits (TBD)				- / 21.113	- / 20.908	- / 20.601	- / 21.225	- / 0.000	- / 172.625
P-40	Total Gross/Weapon System Cost				- / 153.240	- / 204.646	- / 182.536	- / 183.948	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: FY24 funding request for the Surface Training Advanced Virtual Environment (STAVE) Seaframe Simulators reflects modernization and upgrades to existing Integrated Tactical Trainers (ITTs), Bridge part Task Trainers (BPTTs), Virtual Reality Laboratories (VRLs) and Mission Bay Trainers (MBTs).										
FY24 decrease (\$4.550M) for Virtual Reality Laboratories is due to the award of a technical refresh for the San Diego Virtual Reality Laboratories in FY23.										
FY24 increase (\$0.055M) for Mission Bay Trainers & Modernization is due to increased material and labor costs. The LCS Mission Bay Trainer (MBT) suite supports the qualification, training, and team certification of the individuals and teams deploying the LCS main battery - Mission Packages (MP). Live scenarios include prepping and launching/recovering of multi-ton mission module off-hull remote vehicles and operating of the internal cranes, doors, and other associated equipment in the Mission Bay. Modernizations provide updated MP deployment and recovery capability for enhanced warfighting readiness through the use of individual full-scale replicas of the Mission Bay for both variants. Without the Mission Bay Trainer, there will be no realistic controlled scenario homeport training in the Mission Bay operations for the San Diego or Mayport-based crews and detachments during training pipeline, or off-hull, rapid refresh crew team training.										
FY24 decrease (\$35.738M) for Integrated Tactical Trainers (ITT) is due to the award of a major Lethality and Survivability upgrade for the Independence variant Integrated Tactical Trainers in FY23. These are full scale simulators of the Tactical Suite which support initial and proficiency, integrated team training of Bridge, Combat Systems, Engineering, and Mission Package systems/watch stations. The ITT delivers Detect to engage sequencing of ships Combat Systems and supports watch stander Command and Control qualifications and exercises.										
FY24 decrease (\$0.163M) STAVE-LCS Bridge Part Task Trainers (BPTT) and Modernization is due to decreased requirements. The BPTTs support training of bridge watchstanders (including the Readiness Control Officer [RCO]) independent of Combat Systems Operations which are trained in the ITTs. This trainer supports Officer training pipeline at SWCS, Newport in support of Division Officer, Department Head, and PXO/PCO training pipeline for Officer of the Deck Training and rapid refresh and skills enhancement at the LCS Training Facilities (LTFs) in Mayport, FL and San Diego, CA.										

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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204112N	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 223		
<p>FY24 increase (\$1.308M) for STAVE-LCS Combat Systems Virtual Operations Trainer (CS VOT) (LCS 1 and LCS 2) is due to upgrades to the current trainers to achieve capability alignment with LCS5/6 AF. The trainers permit training in selected aspects of Combat Systems Operations to support individual skills development and practice. The CS VOTs located in Newport, Rhode Island, support Tactical Action Officer (TAO) training and qualification.</p> <p>FY24 increase (\$0.409M) for STAVE-LCS Courseware is a new requirement. Funding provided for virtual courseware for new systems with no courses. This interactive courseware is delivered in a game-based environment utilizing a virtual ship environment and completed by students utilizing Virtual Reality Labs. The student are presented all content on computer monitors and are able to perform required watch standing tasks and evolutions in the shipboard virtual environment. This courseware supports the majority of classroom training for LCS watch stations including Engineering Plant Technician (EPT), Readiness Control Officer (RCO), as well as Combat Systems, Information Technology and Deck Operations positions.</p> <p>FY24 increase (\$5.909M) for Surface Warfare Mission Module Training is provided for training systems to support the establishment of a formal Surface to Surface Mission Module (SSMM) Operations and Maintenance Course. This will eliminate the reliance on SSMM interim training. SSMM has embarked and deployed on FREEDOM class LCS platforms and may embark on INDEPENDENCE class LCS platforms in the near future.</p> <p>FY24 increase (\$3.000M) for Engineering Development Model for LCS Training Devices is a new requirement. The training systems at the LTFs are at risk due to not having a dedicated Engineering Development Model (EDM) for testing vulnerability patches and other software upgrades in an isolated and sanitized environment to determine the impact prior to implementation on training systems. Currently patches and software updates are installed and tested on the actual training devices resulting in loss of trainer availability and delays in restoration of the trainer if functionality is impacted.</p> <p>FY24 increase (\$2.000M) for Outfitting for new LCS Squadron (LCSRON) Support Facility in Mayport, FL is to outfit the following: Computers and Audio Visual (A/V) Equipment, Electronic Security System (ESS) Equipment, Smart Grid Equipment, and Video Teleconference Communication (VTC) Equipment. The building occupancy date (BOD) is sometime in late FY23.</p> <p>For MB040/TSTC/BFTT, FY24 decrease (\$3.205M) for Combined IAMD/ASW Trainer (CIAT) is due to reduction in trainer installations and classroom infrastructure upgrades.</p> <p>FY24 decrease (\$0.934M) for Cooperative Engagement Capability (CEC) Training at SEA is due to decreased program requirements. The procurement of shipboard equipment enables the ability to train during underway fleet training exercises, advanced multi-ship capabilities and tactics being delivered with AEGIS and SSDS combat systems.</p> <p>FY24 decrease (\$14.302M) for STAVE is due to the procurement, delivery, and installation of distributed STAVE hardware suites and virtual operator labs.</p> <p>FY24 increase (\$3.692M) for Existing Non-Intrusive Load Monitoring (NILM) (LVC) Training is due to priorities to establish tactically and architecturally aligned integrated tactical training updates that will be developed and fielded to surface ships and provide more timely delivery to shore training sites to allow the sailor to train in schoolhouse facilities with tactically relevant baselines. It will enable Unit and Strike Group, in-port and at-sea high-end fight combat systems tactical training and debrief for Aegis and SSDS FFG, DDG, CG, Amphibs and Carriers. Procures Infrastructure as a Service (IaaS) ORDALT kits and software licenses for shore sites and to support virtualized training in schoolhouse systems.</p> <p>FY24 decrease (\$0.038M) for CVN 78 Class Training Equipment is due to decrease in TTE requirements in support of new CVN 78 Class Contractor Furnished Equipment (CFE) systems.</p> <p>FY24 decrease (\$13.938M) for Ship to Shore Connector (SSC) Life Cycle Training System is due to decrease in requirements for the west coast training solution.</p> <p>FY24 increase (\$1.000M) for P3A Ship Sets is due to additional units procured. Funding will continue the modernization of training capabilities and maintain alignment with fielded Aegis and SSDS tactical capabilities. Shipsets are procured when needed to be delivered to the ship during availability. Installation must happen when the hulls are in an availability. Ships that go without this capability are unable to train and certify for deployment.</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N: Other Procurement, Navy / BA 04: Ordnance Support Equipment / BSA 7: Other Expendable Ordnance		<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0204112N	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> 223		
<p>FY24 decrease (\$0.068M) for P3A Upgrade Kits to maintain alignment with SSDS and Aegis baseline updates to meet tactical training requirements. Additional upgrade kits being procured include Virtual Tactical Bridge Embarked Synthetic Radio (VTBeSR) and SPS-48G radar field change kits in support of initial LVC enhancements. FYDP reflects increasing Planning Yard and Alteration Installation Team (AIT) installation cost requirements, inflation, and upgrade complexity. Quantity decrease due to hardware realignments with combat system baselines. Number of field changes are reducing but the complexity is increasing and shipyard installation costs are rising.</p> <p>FY24 increase (\$61.052M) for P5 Surface Training Device Modifications (CE 1.1.1 Navigation Trainers, CE 1.1.6 STAVE-FFG 62 SEAFRAME SIMULATORS, and CE 2.1.1 SURFACE MINOR MODS) in accordance with Surface and Expeditionary Warfare Training Plan (SEWTP) requirements planned for the fiscal year, including increased Navigation, Seamanship and Shiphandling Trainer (NSST) and Integrated Bridge and Navigation System (IBNS) requirements, non-recurring engineering efforts, trainer procurements, and courseware associated with the first FFG 62 crew being stood up in FY24, critical support for Surface Training Advanced Virtual Environment (STAVE) New Systems and Technical Refresh, the procurement of an additional Anti-Submarine Warfare (ASW) Tactical Employment Trainer (ATET) set that will be installed in Mayport, and additional Virtual Maintenance Trainer (VMT) upgrades ensuring sufficient alignment of training to latest shipboard configurations. This program provides funding to procure, modify, and upgrade training devices to keep them compatible with equivalent changes made to Fleet operational equipment. Funds ensure alignment between Surface Learning Centers and Fleet Concentration Area training systems and Fleet training requirements as dictated by the SEWTP.</p>		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy															Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7							P-1 Line Item Number / Title: 5664 / Surface Training Equipment							Aggregated Items Title: Other Ships Training 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) SURFACE TRAINING ADVANCED VIRTUAL ENVIRONMENT (STAVE) SEAFRAME SIMULATORS																				
1.1) STAVE-LCS Virtual Reality Labs, Networks & Modernization <sup>(1)</sup>	A		-	-	22.184	-	-	-	-	-	5.668	-	-	1.118	-	-	-	-	-	1.118
1.2) STAVE-LCS Mission Bay Trainers & Modernization <sup>(2)</sup>	A		-	-	6.397	-	-	10.400	-	-	0.779	-	-	0.834	-	-	-	-	-	0.834
1.3) STAVE-LCS Integrated Tactics Trainer (ITT) Modernization <sup>(3)</sup>	A		-	-	7.952	-	-	2.152	-	-	38.234	-	-	2.496	-	-	-	-	-	2.496
1.4) STAVE-LCS Bridge Trainers & Modernization <sup>(4)</sup>	A		-	-	17.553	-	-	0.550	-	-	0.991	-	-	0.828	-	-	-	-	-	0.828
1.5) STAVE-LCS Combat Systems Virtual Operations Trainers (CS VOT) <sup>(5)</sup>	A		-	-	5.300	-	-	-	-	-	0.292	-	-	1.600	-	-	-	-	-	1.600
1.6) STAVE - LCS Courseware <sup>(6)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	0.409	-	-	-	-	-	0.409
1.7) STAVE - LCS Surface Warfare Mission Module Training <sup>(7)</sup>	A		-	-	-	-	-	-	-	-	1.020	-	-	6.929	-	-	-	-	-	6.929
1.8) Engineering Development Model for LCS Training Devices <sup>(8)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	3.000	-	-	-	-	-	3.000
1.9) Outfitting for new LCSRON Support Facility in Mayport, FL <sup>(9)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	2.000	-	-	-	-	-	2.000
1.10) STAVE-LCS Integrated Tactical Trainer ITT (Complete System)	A		30,028K	2	60.057	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.11) STAVE-LCS Tactical Action Officer Trainers & Modernization	A		-	-	5.900	-	-	1.788	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) SURFACE TRAINING ADVANCED VIRTUAL ENVIRONMENT (STAVE) SEAFRAME SIMULATORS			-	-	125.343	-	-	14.890	-	-	46.984	-	-	19.214	-	-	-	-	-	19.214
2) MB040 - BFTT/ATD SHIP SETS/TSTC																				



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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7	<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment	<b>Aggregated Items Title:</b> Other Ships Training Equipment
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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)
2.1) MB040 - Combined IAMD/ASW Trainer (CIAT) <sup>(10)</sup>	A		-	-	10.059	-	-	-	-	-	4.717	-	-	1.512	-	-	-	-	-	1.512
2.2) MB040 - Fleet Training Wholeness Strike Group CEC Training at Sea <sup>(11)</sup>	A		-	-	-	-	-	3.489	-	-	4.998	-	-	4.064	-	-	-	-	-	4.064
2.3) MB040 - Surface Advanced Virtual Environment (STAVE) <sup>(12)</sup>	A		-	-	21.751	-	-	-	-	-	32.649	-	-	18.347	-	-	-	-	-	18.347
2.4) MB040 - BFTT Ship Sets	A		481,545.45	11	5.297	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5) MB040 - Live, Virtual, and Constructive (LVC) Training <sup>(13)</sup>	A		-	-	-	-	-	-	-	-	-	-	-	3.692	-	-	-	-	-	3.692
<b>Subtotal: 2) MB040 - BFTT/ATD SHIP SETS/TSTC</b>			-	-	<b>37.107</b>	-	-	<b>3.489</b>	-	-	<b>42.364</b>	-	-	<b>27.615</b>	-	-	-	-	-	<b>27.615</b>
<b>3) CVN 78 Class Training Equipment</b>																				
3.1) CVN 78 Class Training Equipment	A		-	-	30.311	-	-	2.475	-	-	2.468	-	-	2.430	-	-	-	-	-	2.430
<b>Subtotal: 3) CVN 78 Class Training Equipment</b>			-	-	<b>30.311</b>	-	-	<b>2.475</b>	-	-	<b>2.468</b>	-	-	<b>2.430</b>	-	-	-	-	-	<b>2.430</b>
<b>4) Ship to Shore Connector Life Cycle Training System</b>																				
4.1) SSC Life Cycle Training System <sup>(14)</sup>	A		-	-	0.652	-	-	-	-	-	29.265	-	-	15.327	-	-	-	-	-	15.327
<b>Subtotal: 4) Ship to Shore Connector Life Cycle Training System</b>			-	-	<b>0.652</b>	-	-	-	-	-	<b>29.265</b>	-	-	<b>15.327</b>	-	-	-	-	-	<b>15.327</b>
<b>Total</b>			-	-	<b>193.413</b>	-	-	<b>20.854</b>	-	-	<b>121.081</b>	-	-	<b>64.586</b>	-	-	-	-	-	<b>64.586</b>

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

**Footnotes:**

- <sup>(1)</sup> FY24 decrease is due to the fact that significant investments were made in FY23 with the award of the technical refresh for the San Diego LCS Training Facilities (LTF) system, and fewer procurements are planned for FY24. The LTF system was first delivered in 2016.
- <sup>(2)</sup> FY24 increase due to increased material and labor costs.
- <sup>(3)</sup> FY24 decrease due to prior year contract award to perform a Lethality and Survivability upgrade for ITT2A.
- <sup>(4)</sup> FY24 decreased due to reduced requirements.
- <sup>(5)</sup> FY24 increase supports upgrades.
- <sup>(6)</sup> This is a new CE in FY24.
- <sup>(7)</sup> FY24 increase continues support additional Mission Module Training.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7	P-1 Line Item Number / Title: 5664 / Surface Training Equipment	Aggregated Items Title: Other Ships Training Equipment
<p>(8) This is a new CE in FY24.</p> <p>(9) This is a new CE in FY24.</p> <p>(10) FY24 decrease is due to reduction in trainer installations and class room infrastructure upgrades.</p> <p>(11) FY24 decrease reflects program requirements.</p> <p>(12) FY24 decrease is in accordance with the budget requested for the procurement, delivery, and installation of distributed STAVE-CS hardware suites and virtual operator labs.</p> <p>(13) FY24 increase is accordance with fleet priorities to establish tactically aligned training capabilities to field to the ship and shore training sites.</p> <p>(14) FY24 decrease based on remaining requirements for Ship to Shore Connector (SSC) west coast training solution.</p>		

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Exhibit P-5, Cost Analysis: PB 2024 Navy												Date: March 2023						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7						P-1 Line Item Number / Title: 5664 / Surface Training Equipment						Item Number / Title [DODIC]: 1 / TS004 Surface Training Device Mods [TS004]						
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 <i>(Units in Each)</i>				-		-		-		-		-		-				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				372.429		88.166		53.543		114.595		0.000		114.595				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				372.429		88.166		53.543		114.595		0.000		114.595				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				372.429		88.166		53.543		114.595		0.000		114.595				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>				-		-		-		-		-		-				
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 Cost																		
Recurring Cost																		
1.1.1) Navigation Trainers <sup>(15)</sup>	-	-	124.725	-	-	10.600	-	-	13.530	-	-	20.777	-	-	0.000	-	-	20.777
1.1.2) AEGIS Ashore Trainer/C4I/Tech Refresh <sup>(16)</sup>	-	-	33.638	-	-	0.600	-	-	0.500	-	-	0.700	-	-	0.000	-	-	0.700
1.1.3) Combined IAMD/ASW Trainer (CIAT) <sup>(17)</sup>	-	-	96.195	-	-	30.519	-	-	11.800	-	-	13.467	-	-	0.000	-	-	13.467
1.1.4) Navy Training System Plan (NTSP TTE/TD Mods) <sup>(18)</sup>	-	-	33.043	-	-	5.700	-	-	7.150	-	-	7.775	-	-	0.000	-	-	7.775
1.1.5) Technical Training Equipment Modifications <sup>(19)</sup>	-	-	3.780	-	-	0.798	-	-	0.812	-	-	0.827	-	-	0.000	-	-	0.827
1.1.6) STAVE-FFG 62 SEAFRAME SIMULATORS <sup>(20)</sup>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	13.760	-	-	0.000	-	-	13.760
Subtotal: Recurring Cost	-	-	291.381	-	-	48.217	-	-	33.792	-	-	57.306	-	-	0.000	-	-	57.306
Subtotal: Flyaway Cost	-	-	291.381	-	-	48.217	-	-	33.792	-	-	57.306	-	-	0.000	-	-	57.306
Hardware - Trainers Cost Cost																		
Recurring Cost																		

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Exhibit P-5, Cost Analysis: PB 2024 Navy													Date: March 2023					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7						P-1 Line Item Number / Title: 5664 / Surface Training Equipment						Item Number / Title [DODIC]: 1 / TS004 Surface Training Device Mods [TS004]						
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)
2.1.1) SURFACE MINOR MODS <sup>(21)</sup>	-	-	71.541	-	-	37.649	-	-	14.801	-	-	54.019	-	-	0.000	-	-	54.019
2.1.2) FFT/SLEP/ MODULAR TRAINER <sup>(22)</sup>	-	-	7.907	-	-	1.800	-	-	1.700	-	-	1.670	-	-	0.000	-	-	1.670
2.1.3) FCA TRAINERS <sup>(23)</sup>	-	-	1.600	-	-	0.500	-	-	3.250	-	-	1.600	-	-	0.000	-	-	1.600
Subtotal: Recurring Cost	-	-	81.048	-	-	39.949	-	-	19.751	-	-	57.289	-	-	0.000	-	-	57.289
Subtotal: Hardware - Trainers Cost Cost	-	-	81.048	-	-	39.949	-	-	19.751	-	-	57.289	-	-	0.000	-	-	57.289
Gross/Weapon System Cost	-	-	372.429	-	-	88.166	-	-	53.543	-	-	114.595	-	-	0.000	-	-	114.595
Footnotes:																		
<sup>(15)</sup> FY24 funding increased by \$7.247M in accordance with the Surface and Expeditionary Warfare Training Plan (SEWTP) requirements planned for the fiscal year. Funding will support hardware and software technical refresh for Navigation, Seamanship, and Ship-handling Trainers (NSST) reconfigurable simulators, Surface Training Advanced Virtual Environment (STAVE) classrooms, Personnel Qualification Standard (PQS) development to incorporate Integrated Bridge and Navigation Systems (IBNS) specific tasks, facilities modifications to support DDG 51 IBNS training, IBNS curriculum development, fielding of virtual IBNS part task trainers (PTT) for common operator training for use ashore and onboard ships, and instructors to support IBNS specific training throughout the Surface Warfare Schools Command (SWSC) domain and the Surface Training Readiness Management System.																		
<sup>(16)</sup> FY24 funding increased by \$.2M due to parts procurement to align form, fit, and function to fleet assets, and to address part obsolescence. Funds are required for the modernization, delivery, installation and life-cycle upgrades for a high fidelity Aegis Ashore Team Trainer in support of the land-based Aegis Ashore Training Continuum. Funds provide for alignment with DON Chief Information Officer (CIO) Cyber requirements. Funds also provide for the integration of a C4I component, BMD Upgrades, and tech refresh. Funds provide the training facility to train Navy Sailors who will man EPAA land-based BMD facilities in Poland and Romania. The Aegis Ashore Team Trainer (AATT) at Dam Neck, VA will serve as the single site for individual watch team tactical training, certification events and sustainment training for Aegis Ashore rotational crews assigned to AA BMD Host Nation Sites. Funding also supports the In-Plant Support System (IPSS) for the AATT. The AATT in Dam Neck is the only means of training and certifying crews prior to arriving at their host nation site. As an alternative to funding a second AATT, this IPSS will allow for cybersecurity requirements and some maintenance to be conducted separate from the AATT, freeing time to train at the Dam Neck facility and supporting Poland coming online.																		
<sup>(17)</sup> FY24 funding increased by \$1.667 due to the Security Technical Implementation Guides (STIG) compliance and system requirements in the spiral procurement of CIAT. Funds are required across the FYDP for tactical and other software licensing (all baselines), Information Assurance and routine software and hardware modifications of CIAT and Reconfigurable Combat Information Center (CIC) training (RCT) systems and ensures alignment with DON Chief Information Officer (CIO) Cyber requirements and tactical ship modernization. Funds are provided to procure and install hardware for Shore Based IAMD and ASW Trainers. Additionally, procuring and maintaining high fidelity training devices at Fleet Concentration Areas and Navy schoolhouses for operators is less costly than the traditional procuring of lower fidelity ship embedded training systems.																		
<sup>(18)</sup> FY24 funding increased by \$.625M in response to the number of formal courses of instruction that will require NTSP updates during the fiscal year in accordance with the Surface and Expeditionary Warfare Training Plan (SEWTP) requirements. Failure to update these courses will decrease Sailors' ability to operate and maintain these critical systems, hindering ships from effectively executing missions and negatively impacting Fleet readiness. Funds are provided for the procurement and instalation of training equipment and associated logistic support package as outlined in the NTSPs.																		
<sup>(19)</sup> Funds procure Hull Mechanical and Electrical (HM&E) and Combat Systems (CS) technical training equipment (TTE) for the training activities. Provides equipment to augment existing TTE due to increased student throughput, replaces equipment beyond economical repair and procures new equipment.																		

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<b>Exhibit P-5, Cost Analysis: PB 2024 Navy</b>		<b>Date:</b> March 2023
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7	<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment	<b>Item Number / Title [DODIC]:</b> 1 / TS004 Surface Training Device Mods [TS004]
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
<p><sup>(20)</sup> FY24 funding increase of \$13.760 is driven by the first FFG 62 crew being stood up in FY24. Funding is required to conduct non-recurring engineering efforts to adapt AEGIS Training Baseline 10 to a Frigate-oriented baseline in order to support implementation in future training devices (CIAT/RCT/ATET). Funding also supports the acquisition of NSST 5, acquisition of a Next Generation Surface Search Radar (NGSSR) Operator Trainer, and Gap Courseware for the first crew for Government Furnished Equipment (GFE) systems, due to the fact that pipeline training is not yet Ready For Training (RFT)</p> <p><sup>(21)</sup> FY23 funding includes a Congressional adjustment of \$5M to support Surface Training Advanced Virtual Training (STAVE) training requirements. Funding will be provided for additional upgrades for STAVE Virtual Maintenance Trainers (VMT) and STAVE-Network (STAVE-NET) in terms of technical requirements and capability supporting schoolhouse training. FY24 funding increased by \$39.218M in accordance with current Surface and Expeditionary Warfare Training Plan (SEWTP) requirements for the fiscal year, to include critical support for STAVE New Systems and Technical Refresh. FY24 increase also supports the procurement of an additional Anti-Submarine Warfare (ASW) Tactical Employment Trainer (ATET) set that will be installed in Mayport to ensure sufficient ASW student throughput in the Mayport Fleet Concentration Area, as well as additional VMT upgrades in terms of technical requirements and capability supporting Surface Combat Systems Training Command (SCSTC) and ensuring sufficient alignment of training to latest shipboard configurations. Funding in the program of record for this Cost Element is provided for the established (2013) OPNAV N96 STAVE program, enabling training for ~100K officers and enlisted Sailors (annually) on Carriers, Amphibious Ships, Destroyers, Cruisers and LCS. Funding supports critical training requirements, and provides new training systems and modifications for the 200+ fielded surface training systems to keep training systems compatible with equivalent changes made to fleet operational equipment and enhance training capabilities, including Aegis Virtual Operator Trainers (AVOT), VMTs, and Anti-Submarine Warfare SQQ-89A(V)15 Virtual Operator Trainers (ASW VOT), as well as STAVE-NET nodes to provide network connectivity for virtual maintenance classrooms. Funding also supports the following: 1) Life cycle training solutions for DDG 1000 unique Hull, Mechanical and Electrical Systems and Combat Control Systems, 2) Hardware/software to support the implementation of the Surface Training Readiness Management Systems (STRMS), and 3) Technical Training Equipment (TTE) and Rigid Inflatable Boat (RIB) simulators to meet increased fleet training demand.</p> <p><sup>(22)</sup> FY24 funding decreased by \$0.03M in accordance with Surface and Expeditionary Warfare Training Plan (SEWTP) requirements planned for the fiscal year. Funds are provided for the Service Life Extension Program (SLEP) Firefighter Trainer (FFT).</p> <p><sup>(23)</sup> FY24 funding decreased by \$1.65M due to significant technical refresh upgrades for the Multi-Mission Tactical Trainers will be completed in FY23. Funds are provided for upgrades to shore based trainers (Combat System, HM&amp;E) in Fleet Concentration Areas, to include Multi-Mission Team Trainer upgrades</p>		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy							<b>Date:</b> March 2023				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7				<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment				<b>Modification Number / Title:</b> 1 / MB040 - BFTT/ATD Ship Sets			

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)	73.259	13.000	12.800	13.800	0.000	13.800	14.905	15.000	16.000	16.225	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	73.259	13.000	12.800	13.800	0.000	13.800	14.905	15.000	16.000	16.225	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	73.259	13.000	12.800	13.800	0.000	13.800	14.905	15.000	16.000	16.225	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:**

The Total Ship Training Capability (TSTC)/Advanced Training Domain (ATD)/ Battle Force Tactical Training (BFTT) family of systems provides realistic joint warfare training across the spectrum of armed conflict; realistic unit level team training in all warfare areas; a means to link ships together which are in different homeports for coordinated training; external stimulation of shipboard training systems; and simulation of non-shipboard forces.

TSTC/ATD/BFTT uses a distributed architecture, integrating existing training systems, and uses Distributed Interactive Simulation (DIS) and High Level Architecture (HLA) protocols.

TSTC/ATD/BFTT provides ships' Commanding Officers and Strike Group/Battle Force (SG/BF) Commanders with the ability to conduct coordinated realistic, high stress, combat system level team training as an integral part of the Afloat Training Groups (ATGs), the Tactical Training Groups and C2F/C3F Fleet Synthetic Training (FSTs)/Live Virtual Constructive (LVC) exercises.

The Total Ship Training Capability (TSTC) integrates existing and emergent onboard training and assessment system capabilities to simulate realistic, "train like you fight", combat-like conditions across weapon sensor and combat systems.

Migration to TSTC improvements is required to ensure continued, persistent FST/LVC interoperability to deliver training that is commensurate with tactical capabilities.

BFTT AN/USQ-T46 and ATD AN/USQ-T52/T52A are core components of the TSTC.

Commercial off the Shelf (COTS) Obsolescence mitigates replacement and upgrade of obsolete and out-of-production COTS components in BFTT systems installed throughout the Fleet to include the AN/USQ-T46D upgrade.

BFTT T46 and T52 Ship set configurations vary depending on AEGIS or Ship Self Defense System (SSDS) installation. T46/T52's for SSDS include additional materials and units to be integrated for stimulation of the ships sensors.

TSTC/ATD/BFTT Ship Set funding will procure T46's and T52's and subsequent variants of hardware and software for Build 5.x series in support of AN/SQQ-89 upgrades, AN/SLQ-32(V)6 upgrades, AN/USG-2B upgrades, and ATD software builds in support of AEGIS Baseline 9 TI-16 upgrades and SSDS upgrades -- which drives the difference in unit cost.

Installation funding supports installation of BFTT/ATD Systems.

Additional costs will be incurred to procure materials needed to ensure cyber security requirements are met and to maintain connectivity with Navy Continuous Training Environment (NCTE) to meet shipboard integrated training demands.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7				<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment						<b>Modification Number / Title:</b> 1 / MB040 - BFTT/ATD Ship Sets			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> BFTT/ATD SHIP SETS - T46/T52's				<b>Modification Type:</b> TBD				<b>Related RDT&amp;E PEs:</b> 0204571N					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> MB040 - BFTT/ATD Ship Sets													
B Kits													
Recurring													
1.1.1) BFTT/ATD Ship Sets - NonOrganic <sup>(24)</sup>	51 / 50.094	8 / 8.000	8 / 8.000	9 / 9.000	- / -	9 / 9.000	10 / 10.000	10 / 10.000	11 / 11.000	11 / 11.000	Continuing	Continuing	
<b>Subtotal: Recurring</b>	- / 50.094	- / 8.000	- / 8.000	- / 9.000	- / -	- / 9.000	- / 10.000	- / 10.000	- / 11.000	- / 11.000	Continuing	Continuing	
<b>Subtotal: MB040 - BFTT/ATD Ship Sets</b>	51 / 50.094	8 / 8.000	8 / 8.000	9 / 9.000	- / -	9 / 9.000	10 / 10.000	10 / 10.000	11 / 11.000	11 / 11.000	Continuing	Continuing	
<b>Subtotal: Procurement, All Modification Items</b>	- / 50.094	- / 8.000	- / 8.000	- / 9.000	- / -	- / 9.000	- / 10.000	- / 10.000	- / 11.000	- / 11.000	Continuing	Continuing	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> MB040 - BFTT/ATD Ship Sets	- / 23.165	- / 5.000	- / 4.800	- / 4.800	- / 0.000	- / 4.800	- / 4.905	- / 5.000	- / 5.000	- / 5.225	- / 5.225	- / 63.120	
<b>Subtotal: Installation</b>	- / 23.165	- / 5.000	- / 4.800	- / 4.800	- / -	- / 4.800	- / 4.905	- / 5.000	- / 5.000	- / 5.225	- / 5.225	- / 63.120	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	73.259	13.000	12.800	13.800	0.000	13.800	14.905	15.000	16.000	16.225	Continuing	Continuing	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy												<b>Date:</b> March 2023																			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7										<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment										<b>Modification Number / Title:</b> 1 / MB040 - BFTT/ATD Ship Sets											
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :														<b>MDAP/MAIS Code:</b>																	
<b>Modification Item 1 of 1:</b> MB040 - BFTT/ATD Ship Sets																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Various <sup>(25)</sup>														Manufacturer Location: Various																	
Administrative Leadtime <i>(in Months)</i> : 2														Production Leadtime <i>(in Months)</i> : 9																	
<b>Dates</b>		<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>					
Contract Dates		Dec 2020				Dec 2021				Dec 2022				Dec 2023				Dec 2024				Dec 2025				Dec 2026					
Delivery Dates		Sep 2021				Sep 2022				Sep 2023				Sep 2024				Sep 2025				Sep 2026				Sep 2027					
<b>Installation Information</b>																															
<b>Method of Implementation:</b> AIT:: Installation Name: BFTT/ATD Ship Sets																															
<b>Installation Cost</b>		<b>Prior Years</b>		<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>		<b>FY 2025</b>		<b>FY 2026</b>		<b>FY 2027</b>		<b>FY 2028</b>		<b>To Complete</b>		<b>Total</b>							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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		41 / 23.165		10 / 5.000		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		51 / 28.165							
FY 2022		- / -		- / -		8 / 4.800		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		8 / 4.800							
FY 2023		- / -		- / -		- / -		8 / 4.800		0 / 0.000		8 / 4.800		- / -		- / -		- / -		- / -		0 / 0.000		8 / 4.800							
FY 2024		- / -		- / -		- / -		- / -		- / -		- / -		9 / 4.905		- / -		- / -		- / -		0 / 0.000		9 / 4.905							
FY 2025		- / -		- / -		- / -		- / -		- / -		- / -		- / -		10 / 5.000		- / -		- / -		0 / 0.000		10 / 5.000							
FY 2026		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		10 / 5.000		- / -		0 / 0.000		10 / 5.000							
FY 2027		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 5.225		11 / 0.000		11 / 5.225							
FY 2028		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		11 / 0.000		0 / 5.225		11 / 5.225							
To Complete		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total		41 / 23.165		10 / 5.000		8 / 4.800		8 / 4.800		0 / 0.000		8 / 4.800		9 / 4.905		10 / 5.000		10 / 5.000		11 / 5.225		11 / 5.225		118 / 63.120							
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	41	2	3	4	1	1	2	3	2	1	2	2	3	1	3	3	2	1	3	3	3	2	3	3	2	2	3	3	3	11	118
Out	41	-	5	4	1	-	4	2	2	1	2	2	3	-	3	3	3	1	3	3	3	1	3	3	3	1	3	3	4	11	118
<b>Footnotes:</b> <sup>(24)</sup> Materials and quantities installed are required to meet cyber security requirements and to maintain connectivity with Navy Continuous Training Environment (NCTE) to meet shipboard integrated training demands. Funds make upgrade kit fleet requirements whole. <sup>(25)</sup> Contract and Delivery Dates reflect that ship sets are contracted to procure on average 1 year prior to installation.																															



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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7					<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment					<b>Modification Number / Title:</b> 2 / MB040 BFTT/ATD/TSTC Upgrade Kits		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :							<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	42.207	13.794	16.271	16.506	0.000	16.506	21.113	20.908	20.601	21.225	0.000	172.625
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	42.207	13.794	16.271	16.506	0.000	16.506	21.113	20.908	20.601	21.225	0.000	172.625
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>42.207</b>	<b>13.794</b>	<b>16.271</b>	<b>16.506</b>	<b>0.000</b>	<b>16.506</b>	<b>21.113</b>	<b>20.908</b>	<b>20.601</b>	<b>21.225</b>	<b>0.000</b>	<b>172.625</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Dollars</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<p><b>Description:</b></p> <p>Total Ship Training Capability (TSTC)/ Battle Force Tactical Training (BFTT) family of systems Upgrade Kits procure, install, and remove various quantities of upgrade kit/Engineering Change Proposal (ECP) system components, ShipAlts, Field Changes and Software Deliveries on surface ships and related shore sites to support the fleet's needs. Upgrade kits also support Shipboard Connectivity Suite (SCS) Tech Refresh and Fleet Synthetic Training (FST) Shipboard Network Connectivity upgrades.</p> <p>ShipAlts are upgrades driven by Combat Systems configuration as well as training configuration requirements.</p> <p>Field Changes include existing BFTT Hardware T46 and Software Baselines 5.0 and 5.1 upgrades, Advanced Training Domain (ATD) T52/T52A hardware upgrades, Battle force Electronic Warfare Trainer (BEWT) Baseline II Hardware &amp; Software upgrades, and Training Simulation Stimulation System (TSSS) legacy radar interface upgrades, and Virtual Tactical Bridge Embarked Synthetic Radio (VTBeSR) systems.</p> <p>Software Deliveries are required to support Combat System, IA/cyber and BFTT/BEWT/BEWT-II/TSTC/TSSS/VTBeSR Hardware requirements.</p> <p>Upgrade BFTT/TSTC Shipboard Connectivity Suite (SCS) through a Tech Refresh, to meet Navy Continuous Training Environment (NCTE), interoperability, and cybersecurity requirements.</p> <p>Upgrade Shipboard Network Connectivity in support of Fleet Synthetic Training (FST) At Sea capability in support of Strike Group certification training events.</p> <p>Upgrades include Information Assurance (IA)/cybersecurity compliance, as well as Obsolescence, Network upgrades and externally driven interface modifications.</p>												

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy										<b>Date:</b> March 2023			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7				<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment						<b>Modification Number / Title:</b> 2 / MB040 BFTT/ATD/TSTC Upgrade Kits			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :								<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> Battle Force Tactical Training, Advanced Training Domain, Total Ship Training Capability Upgrade Kit				<b>Modification Type:</b> TBD				<b>Related RDT&amp;E PEs:</b> 0204571N					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> MB040 BFTT/ATD/TSTC Upgrade Kits													
B Kits													
Recurring													
1.1.1) BFTT/ATD/TSTC Upgrade Kits - NonOrganic <sup>(26)</sup>	400 / 14.339	89 / 5.717	87 / 6.719	87 / 6.651	- / -	87 / 6.651	98 / 10.769	96 / 10.647	96 / 10.048	96 / 10.588	- / -	1,049 / 75.478	
<i>Subtotal: Recurring</i>	- / 14.339	- / 5.717	- / 6.719	- / 6.651	- / -	- / 6.651	- / 10.769	- / 10.647	- / 10.048	- / 10.588	- / 0.000	- / 75.478	
<i>Subtotal: MB040 BFTT/ATD/TSTC Upgrade Kits</i>	400 / 14.339	89 / 5.717	87 / 6.719	87 / 6.651	- / -	87 / 6.651	98 / 10.769	96 / 10.647	96 / 10.048	96 / 10.588	- / -	1,049 / 75.478	
<i>Subtotal: Procurement, All Modification Items</i>	- / 14.339	- / 5.717	- / 6.719	- / 6.651	- / -	- / 6.651	- / 10.769	- / 10.647	- / 10.048	- / 10.588	- / 0.000	- / 75.478	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> MB040 BFTT/ATD/TSTC Upgrade Kits	- / 27.868	- / 8.077	- / 9.552	- / 9.855	- / 0.000	- / 9.855	- / 10.344	- / 10.261	- / 10.553	- / 10.637	- / 0.000	- / 97.147	
<i>Subtotal: Installation</i>	- / 27.868	- / 8.077	- / 9.552	- / 9.855	- / -	- / 9.855	- / 10.344	- / 10.261	- / 10.553	- / 10.637	- / 0.000	- / 97.147	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>42.207</b>	<b>13.794</b>	<b>16.271</b>	<b>16.506</b>	<b>0.000</b>	<b>16.506</b>	<b>21.113</b>	<b>20.908</b>	<b>20.601</b>	<b>21.225</b>	<b>0.000</b>	<b>172.625</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2024 Navy							<b>Date:</b> March 2023																								
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1810N / 04 / 7				<b>P-1 Line Item Number / Title:</b> 5664 / Surface Training Equipment				<b>Modification Number / Title:</b> 2 / MB040 BFTT/ATD/TSTC Upgrade Kits																							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :							<b>MDAP/MAIS Code:</b>																								
<b>Modification Item 1 of 1:</b> MB040 BFTT/ATD/TSTC Upgrade Kits																															
<b>Manufacturer Information</b>																															
Manufacturer Name: VARIOUS <sup>(27)</sup>							Manufacturer Location: VARIOUS																								
Administrative Leadtime <i>(in Months)</i> : 3							Production Leadtime <i>(in Months)</i> : 3																								
<b>Dates</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>																								
Contract Dates	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025	Dec 2026	Dec 2027																								
Delivery Dates	Mar 2022	Mar 2023	Mar 2024	Mar 2025	Mar 2026	Mar 2027	Mar 2028																								
<b>Installation Information</b>																															
<b>Method of Implementation:</b> AIT:: Installation Name: BFTT/ATD/TSTC Upgrade Kits																															
<b>Installation Cost</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>To Complete</b>	<b>Total</b>																			
	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>																		
Prior Years	348 / 27.868	52 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	400 / 27.868																			
FY 2022	- / -	47 / 8.077	42 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	89 / 8.077																			
FY 2023	- / -	- / -	52 / 9.552	35 / 0.000	0 / 0.000	35 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	87 / 9.552																			
FY 2024	- / -	- / -	- / -	49 / 9.855	0 / 0.000	49 / 9.855	38 / 0.000	- / -	- / -	- / -	0 / 0.000	87 / 9.855																			
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	49 / 10.344	49 / 0.000	- / -	- / -	0 / 0.000	98 / 10.344																			
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	53 / 10.261	43 / 0.000	- / -	0 / 0.000	96 / 10.261																			
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	53 / 10.553	43 / 0.000	0 / 0.000	96 / 10.553																			
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 10.637	46 / 0.000	96 / 10.637																			
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
Total	348 / 27.868	99 / 8.077	94 / 9.552	84 / 9.855	0 / 0.000	84 / 9.855	87 / 10.344	102 / 10.261	96 / 10.553	93 / 10.637	46 / 0.000	1,049 / 97.147																			
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>FY 2026</b>				<b>FY 2027</b>				<b>FY 2028</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	348	26	26	24	23	24	18	22	30	23	12	23	26	23	15	25	24	26	23	25	28	21	22	27	26	22	21	24	26	46	1,049
Out	348	26	26	24	23	24	18	22	30	23	12	23	26	23	15	25	24	26	23	25	28	21	22	27	26	22	21	24	26	46	1,049
<b>Footnotes:</b>																															
<sup>(26)</sup> Install costs increase reflects increasing Planning Yard and Alteration Installation Team (AIT) installation cost requirements, inflation, and upgrade complexity. Installation cost adjustments will continue to be updated in future budget cycles to reflect current costs Unit costs for upgrade kits are variable due to the unique software and/or hardware required by the specific training capability improvement. Unit costs are variable due to the unique software and/or hardware required by the specific training capability improvement. For example, a software upgrade kit average unit cost is \$30K where as a hardware upgrade unit																															

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Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 04 / 7	P-1 Line Item Number / Title: 5664 / Surface Training Equipment	Modification Number / Title: 2 / MB040 BFTT/ATD/TSTC Upgrade Kits
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>cost could be as much as \$160K based on the upgrade requirements. The field change kits being procured and installed are required to rapidly update installations in order to meet cyber security requirements, timelines to maintain cyber security accreditations, and to meet Fleet Synthetic Training (FST) at sea permanent change modification. This line absorbs Fleet Training Wholeness Strike Group CEC Training at Sea P40A line starting in FY25.</p> <p>(27) Upgrade kit procurements are on average initiated in first quarter and become available in second quarter of the current fiscal year for installation in third quarter, finishing in second quarter of the next fiscal year.</p>		