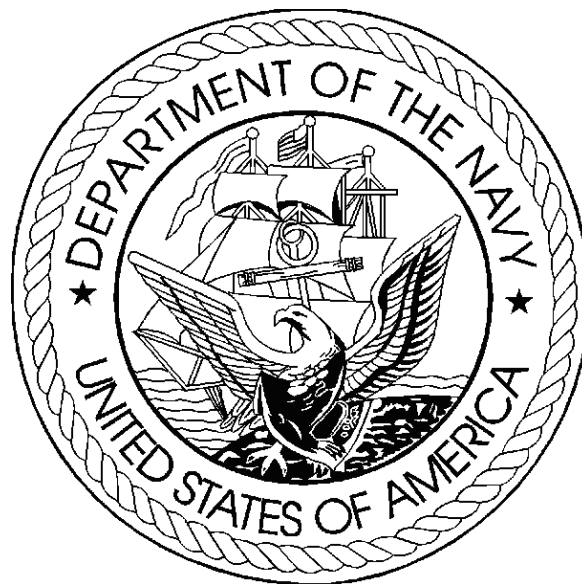


UNCLASSIFIED

**Department of Defense
Fiscal Year (FY) 2017 President's Budget Submission**

February 2016



Navy

Justification Book Volume 1 of 5

Other Procurement, Navy

BA 1

UNCLASSIFIED

The estimated cost for this report for the Department of the Navy (DON) is \$46,537.

The estimated total cost for supporting the DON budget justification material is approximately \$1,834,000 for the 2016 fiscal year. This includes \$75,200 in supplies and \$1,758,800 in labor.

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Table of Volumes

Navy.....	Volume 1
Navy.....	Volume 2
Navy.....	Volume 3
Navy.....	Volume 4
Navy.....	Volume 5

UNCLASSIFIED

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Volume 1 Table of Contents

Introduction and Explanation of Contents.....Volume 1 - v
Comptroller Exhibit P-1.....Volume 1 - vii
Master Line Item Table of Contents (by Appropriation then Line Number).....Volume 1 - xxxiii
Master Line Item Table of Contents (Alphabetically by Line Item Title).....Volume 1 - xlv
Exhibit P-40s..... Volume 1 - 1

UNCLASSIFIED

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

Department of Defense Appropriations Act, 2017

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, \$6,463,067,000, to remain available for obligation until September 30, 2019.

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation -----	FY 2015 (Base & OCO) -----	FY 2016 Base Enacted -----	FY 2016 OCO Enacted -----	FY 2016 Total Enacted -----
Other Procurement, Navy	6,405,148	6,484,257	12,186	6,496,443
Total Department of the Navy	6,405,148	6,484,257	12,186	6,496,443

UNCLASSIFIED

Department of the Navy
FY 2017 President's Budget
Exhibit P-1 FY 2017 President's Budget
Total Obligational Authority
(Dollars in Thousands)

14 Jan 2016

Appropriation -----	FY 2017 Base -----	FY 2017 OCO -----	FY 2017 Total -----
Other Procurement, Navy	6,338,861	124,206	6,463,067
Total Department of the Navy	6,338,861	124,206	6,463,067

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: Other Procurement, Navy

Budget Activity -----	FY 2015 (Base & OCO) -----	FY 2016 Base Enacted -----	FY 2016 OCO Enacted -----	FY 2016 Total Enacted -----
01. Ships Support Equipment	2,275,493	1,846,326		1,846,326
02. Communications & Electronics Equip	2,229,171	2,354,322		2,354,322
03. Aviation Support Equipment	370,526	419,225		419,225
04. Ordnance Support Equipment	693,093	852,207		852,207
05. Civil Engineering Support Equip	54,526	54,933	186	55,119
06. Supply Support Equipment	92,883	246,708		246,708
07. Personnel & Command Support Equip	386,985	403,072		415,072
08. Spares and Repair Parts	302,471	307,464		307,464
Total Other Procurement, Navy	6,405,148	6,484,257	12,186	6,496,443

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: Other Procurement, Navy

Budget Activity -----	FY 2017 Base -----	FY 2017 OCO -----	FY 2017 Total -----
01. Ships Support Equipment	1,878,390		1,878,390
02. Communications & Electronics Equip	2,122,908	12,000	2,134,908
03. Aviation Support Equipment	439,109		439,109
04. Ordnance Support Equipment	933,565	99,329	1,032,894
05. Civil Engineering Support Equip	84,345	630	84,975
06. Supply Support Equipment	316,609	25	316,634
07. Personnel & Command Support Equip	364,275	12,222	376,497
08. Spares and Repair Parts	199,660		199,660
Total Other Procurement, Navy	6,338,861	124,206	6,463,067

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Ships Support Equipment											
Ship Propulsion Equipment											
1	LM-2500 Gas Turbine	A		7,822		4,881				4,881	U
2	Allison 501k Gas Turbine	A		2,155		5,814				5,814	U
3	Surface Power Equipment	A									U
4	Hybrid Electric Drive (HED)			12,638		29,106				29,106	U
Generators											
5	Surface Combatant HM&E	A		26,664		36,860				36,860	U
Navigation Equipment											
6	Other Navigation Equipment	A		39,298		87,481				87,481	U
Periscopes											
7	Sub Periscopes & Imaging Equip	A		57,221		63,109				63,109	U
Other Shipboard Equipment											
8	Sub Periscope, Imaging and Supt Equip Prog	A									U
9	DDG Mod	A		324,219		421,195				421,195	U
10	Firefighting Equipment	A		15,134		13,983				13,983	U
11	Command and Control Switchboard	A		2,219		2,255				2,255	U
12	LHA/LHD Midlife	A		13,826		26,545				26,545	U
13	LCC 19/20 Extended Service Life Program	A		21,025		8,631				8,631	U
14	Pollution Control Equipment	B		10,146		16,609				16,609	U
15	Submarine Support Equipment	A		11,815		10,498				10,498	U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xi

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Ships Support Equipment									
Ship Propulsion Equipment									
1	LM-2500 Gas Turbine	A							U
2	Allison 501k Gas Turbine	A							U
3	Surface Power Equipment	A		15,514			15,514		U
4	Hybrid Electric Drive (HED)			40,132			40,132		U
Generators									
5	Surface Combatant HM&E	A		29,974			29,974		U
Navigation Equipment									
6	Other Navigation Equipment	A		63,942			63,942		U
Periscopes									
7	Sub Periscopes & Imaging Equip	A							U
Other Shipboard Equipment									
8	Sub Periscope, Imaging and Supt Equip Prog	A		136,421			136,421		U
9	DDG Mod	A		367,766			367,766		U
10	Firefighting Equipment	A		14,743			14,743		U
11	Command and Control Switchboard	A		2,140			2,140		U
12	LHA/LHD Midlife	A		24,939			24,939		U
13	LCC 19/20 Extended Service Life Program	A							U
14	Pollution Control Equipment	B		20,191			20,191		U
15	Submarine Support Equipment	A		8,995			8,995		U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
16	Virginia Class Support Equipment	A		69,168		35,747				35,747	U
17	LCS Class Support Equipment			25,742		39,349				39,349	U
18	Submarine Batteries			32,752		23,072				23,072	U
19	LPD Class Support Equipment			35,979		45,929				45,929	U
20	DDG 1000 Class Support Equipment	A									U
21	Strategic Platform Support Equip	A		11,558		18,563				18,563	U
22	DSSP Equipment	A		5,518		7,376				7,376	U
23	CG Modernization	A		375,500							U
24	LCAC	A		7,380		15,125				15,125	U
25	Underwater EOD Programs			58,576		51,652				51,652	U
26	Items Less Than \$5 Million	A		70,512		95,349				95,349	U
27	Chemical Warfare Detectors	A		2,937		3,027				3,027	U
28	Submarine Life Support System	A		8,385		7,399				7,399	U
	Reactor Plant Equipment										
29	Reactor Power Units	A		298,200							U
30	Reactor Components	A		288,822		296,095				296,095	U
	Ocean Engineering										
31	Diving and Salvage Equipment	A		10,572		15,982				15,982	U
	Small Boats										
32	Standard Boats	A		180,365		29,982				29,982	U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xiii

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
16	Virginia Class Support Equipment	A		66,838			66,838		U
17	LCS Class Support Equipment			54,823			54,823		U
18	Submarine Batteries			23,359			23,359		U
19	LPD Class Support Equipment			40,321			40,321		U
20	DDG 1000 Class Support Equipment	A		33,404			33,404		U
21	Strategic Platform Support Equip	A		15,836			15,836		U
22	DSSP Equipment	A		806			806		U
23	CG Modernization	A							U
24	LCAC	A		3,090			3,090		U
25	Underwater EOD Programs			24,350			24,350		U
26	Items Less Than \$5 Million	A		88,719			88,719		U
27	Chemical Warfare Detectors	A		2,873			2,873		U
28	Submarine Life Support System	A		6,043			6,043		U
	Reactor Plant Equipment								
29	Reactor Power Units	A							U
30	Reactor Components	A		342,158			342,158		U
	Ocean Engineering								
31	Diving and Salvage Equipment	A		8,973			8,973		U
	Small Boats								
32	Standard Boats	A		43,684			43,684		U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xiv

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Training Equipment											
33	Other Ships Training Equipment	A		17,152		62,358				62,358	U
Production Facilities Equipment											
34	Operating Forces Ipe	A		39,306		58,138				58,138	U
Other Ship Support											
35	Nuclear Alterations	A		118,129		132,625				132,625	U
36	LCS Common Mission Modules Equipment			30,938		23,061				23,061	U
37	LCS MCM Mission Modules			15,270		67,451				67,451	U
38	LCS ASW Mission Modules										U
39	LCS SUW Mission Modules			14,750		35,228				35,228	U
40	Remote Minehunting System (RMS)	A				53,077				53,077	U
Logistic Support											
41	LSD Midlife			13,800		2,774				2,774	U
Total Ships Support Equipment				2,275,493		1,846,326				1,846,326	
Budget Activity 02: Communications & Electronics Equip											
Ship Sonars											
42	SPQ-9B Radar	A		26,735		19,841				19,841	U
43	AN/SQQ-89 Surf ASW Combat System	A		78,802		103,241				103,241	U
44	SSN Acoustics	A		160,932		232,835				232,835	U
45	SSN Acoustic Equipment	A									U
46	Undersea Warfare Support Equipment	A		4,663		7,331				7,331	U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xv

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Training Equipment									
33	Other Ships Training Equipment	A							U
Production Facilities Equipment									
34	Operating Forces Ipe	A		75,421			75,421		U
Other Ship Support									
35	Nuclear Alterations	A		172,718			172,718		U
36	LCS Common Mission Modules Equipment			27,840			27,840		U
37	LCS MCM Mission Modules			57,146			57,146		U
38	LCS ASW Mission Modules			31,952			31,952		U
39	LCS SUW Mission Modules			22,466			22,466		U
40	Remote Minehunting System (RMS)	A							U
Logistic Support									
41	LSD Midlife			10,813			10,813		U
Total Ships Support Equipment				1,878,390			1,878,390		
Budget Activity 02: Communications & Electronics Equip									

Ship Sonars									
42	SPQ-9B Radar	A		14,363			14,363		U
43	AN/SQQ-89 Surf ASW Combat System	A		90,029			90,029		U
44	SSN Acoustics	A							U
45	SSN Acoustic Equipment	A		248,765			248,765		U
46	Undersea Warfare Support Equipment	A		7,163			7,163		U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
47	Sonar Switches and Transducers	A		11,621		11,781				11,781	U
	ASW Electronic Equipment										
48	Submarine Acoustic Warfare System	A		22,721		19,718				19,718	U
49	SSTD	A		10,653		8,396				8,396	U
50	Fixed Surveillance System	A		170,831		146,968				146,968	U
51	SURTASS	A		23,819		12,953				12,953	U
52	Maritime Patrol and Reconnaissance Force	A		14,390		13,725				13,725	U
	Electronic Warfare Equipment										
53	AN/SLQ-32	A		195,082		296,271				296,271	U
	Reconnaissance Equipment										
54	Shipboard IW Exploit	A		123,362		138,002				138,002	U
55	Automated Identification System (AIS)			164		152				152	U
	Submarine Surveillance Equipment										
56	Submarine Support Equipment Prog	A		36,938		78,816				78,816	U
	Other Ship Electronic Equipment										
57	Cooperative Engagement Capability	B		33,939		25,695				25,695	U
58	Trusted Information System (TIS)			324		284				284	U
59	Naval Tactical Command Support System (NTCSS)	A		8,066		14,416				14,416	U
60	ATDLS	A		16,568		23,069				23,069	U
61	Navy Command and Control System (NCCS)			5,219		4,054				4,054	U
62	Minesweeping System Replacement	A		36,259		21,014				21,014	U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xvii

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
47	Sonar Switches and Transducers	A							U
	ASW Electronic Equipment								
48	Submarine Acoustic Warfare System	A		21,291			21,291		U
49	SSTD	A		6,893			6,893		U
50	Fixed Surveillance System	A		145,701			145,701		U
51	SURTASS	A		36,136			36,136		U
52	Maritime Patrol and Reconnaissance Force	A							U
	Electronic Warfare Equipment								
53	AN/SLQ-32	A		274,892			274,892		U
	Reconnaissance Equipment								
54	Shipboard IW Exploit	A		170,733			170,733		U
55	Automated Identification System (AIS)			958			958		U
	Submarine Surveillance Equipment								
56	Submarine Support Equipment Prog	A							U
	Other Ship Electronic Equipment								
57	Cooperative Engagement Capability	B		22,034			22,034		U
58	Trusted Information System (TIS)								U
59	Naval Tactical Command Support System (NTCSS)	A		12,336			12,336		U
60	ATDLS	A		30,105			30,105		U
61	Navy Command and Control System (NCCS)			4,556			4,556		U
62	Minesweeping System Replacement	A		56,675			56,675		U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xviii

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
63	Shallow Water MCM	B									U
64	Navstar GPS Receivers (SPACE)	A		15,232		12,359			12,359		U
65	American Forces Radio and TV Service	A		4,524		4,240			4,240		U
66	Strategic Platform Support Equip	A		7,308		17,440			17,440		U
	Training Equipment										
67	Other Training Equipment	A		42,810		41,314			41,314		U
	Aviation Electronic Equipment										
68	Matcals	A		19,779		10,011			10,011		U
69	Ashore ATC Equipment	A									U
70	Afloat ATC Equipment	A									U
71	Shipboard Air Traffic Control	B		9,366		9,346			9,346		U
72	Automatic Carrier Landing System	A		21,357		21,281			21,281		U
73	National Air Space System	B		26,639		25,621			25,621		U
74	Fleet Air Traffic Control Systems	A		9,672		8,249			8,249		U
75	Landing Systems	A		9,602		14,715			14,715		U
76	ID Systems	A		28,085		29,676			29,676		U
77	Naval Mission Planning Systems	A		13,950		13,737			13,737		U
	Other Shore Electronic Equipment										
78	Deployable Joint Command & Control	A		1,205		1,314			1,314		U
79	Maritime Integrated Broadcast System			3,447							U
80	Tactical/Mobile C4I Systems	A		16,766		13,600			13,600		U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
63	Shallow Water MCM	B		8,875			8,875		U
64	Navstar GPS Receivers (SPACE)	A		12,752			12,752		U
65	American Forces Radio and TV Service	A		4,577			4,577		U
66	Strategic Platform Support Equip	A		8,972			8,972		U
	Training Equipment								
67	Other Training Equipment	A							U
	Aviation Electronic Equipment								
68	Matcals	A							U
69	Ashore ATC Equipment	A		75,068			75,068		U
70	Afloat ATC Equipment	A		33,484			33,484		U
71	Shipboard Air Traffic Control	B							U
72	Automatic Carrier Landing System	A							U
73	National Air Space System	B							U
74	Fleet Air Traffic Control Systems	A							U
75	Landing Systems	A							U
76	ID Systems	A		22,177			22,177		U
77	Naval Mission Planning Systems	A		14,273			14,273		U
	Other Shore Electronic Equipment								
78	Deployable Joint Command & Control	A							U
79	Maritime Integrated Broadcast System								U
80	Tactical/Mobile C4I Systems	A		27,927			27,927		U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xx

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
81	DCGS-N	A		23,649		31,809				31,809	U
82	CANES			355,046		275,641				275,641	U
83	RADIAC	A		5,153		8,294				8,294	U
84	CANES-Intell			61,215		28,695				28,695	U
85	GPETE	A		6,284		6,962				6,962	U
86	MASF					290				290	U
87	Integ Combat System Test Facility	A		4,016		14,419				14,419	U
88	EMI Control Instrumentation	A		4,113		4,175				4,175	U
89	Items Less Than \$5 Million	A		64,235		66,176				66,176	U
Shipboard Communications											
90	Shipboard Tactical Communications	A		14,410		8,722				8,722	U
91	Ship Communications Automation	A		20,830		108,477				108,477	U
92	Communications Items Under \$5M	A		14,145		16,613				16,613	U
Submarine Communications											
93	Submarine Broadcast Support	A		11,057		16,021				16,021	U
94	Submarine Communication Equipment	A		64,954		60,945				60,945	U
Satellite Communications											
95	Satellite Communications Systems	A		13,743		30,892				30,892	U
96	Navy Multiband Terminal (NMT)			233,162		118,113				118,113	U
Shore Communications											
97	JCS Communications Equipment	A		4,369		4,591				4,591	U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
81	DCGS-N	A		12,676		12,000		24,676	U
82	CANES			212,030				212,030	U
83	RADIAC	A		8,092				8,092	U
84	CANES-Intell			36,013				36,013	U
85	GPETE	A		6,428				6,428	U
86	MASF								U
87	Integ Combat System Test Facility	A		8,376				8,376	U
88	EMI Control Instrumentation	A		3,971				3,971	U
89	Items Less Than \$5 Million	A		58,721				58,721	U
Shipboard Communications									
90	Shipboard Tactical Communications	A		17,366				17,366	U
91	Ship Communications Automation	A		102,479				102,479	U
92	Communications Items Under \$5M	A		10,403				10,403	U
Submarine Communications									
93	Submarine Broadcast Support	A		34,151				34,151	U
94	Submarine Communication Equipment	A		64,529				64,529	U
Satellite Communications									
95	Satellite Communications Systems	A		14,414				14,414	U
96	Navy Multiband Terminal (NMT)			38,365				38,365	U
Shore Communications									
97	JCS Communications Equipment	A		4,156				4,156	U

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
98	Electrical Power Systems Cryptographic Equipment	A		1,402		1,403				1,403	U
99	Info Systems Security Program (ISSP)	A		101,110		135,687				135,687	U
100	MIO Intel Exploitation Team Cryptologic Equipment	A		979		970				970	U
101	Cryptologic Communications Equip Other Electronic Support	A		11,502		11,433				11,433	U
102	Coast Guard Equipment	A		2,967		2,529				2,529	U
Total Communications & Electronics Equip				2,229,171		2,354,322				2,354,322	
Budget Activity 03: Aviation Support Equipment											

Sonobuoys											
103	Sonobuoys - All Types Aircraft Support Equipment	A		182,890		168,763				168,763	U
104	Weapons Range Support Equipment	A		47,944		46,979				46,979	U
105	Aircraft Support Equipment	A		55,195		123,884				123,884	U
106	Meteorological Equipment	A		12,825		15,090				15,090	U
107	DCRS/DPL	A		1,415		638				638	U
108	Airborne Mine Countermeasures	A		23,152		14,098				14,098	U
109	Aviation Support Equipment	A		47,105		49,773				49,773	U
Total Aviation Support Equipment				370,526		419,225				419,225	

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xxiii

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
98	Electrical Power Systems Cryptographic Equipment	A							U
99	Info Systems Security Program (ISSP)	A		85,694				85,694	U
100	MIO Intel Exploitation Team Cryptologic Equipment	A		920				920	U
101	Cryptologic Communications Equip Other Electronic Support	A		21,098				21,098	U
102	Coast Guard Equipment	A		32,291				32,291	U
Total Communications & Electronics Equip				2,122,908		12,000		2,134,908	
Budget Activity 03: Aviation Support Equipment									

Sonobuoys									
103	Sonobuoys - All Types	A		162,588				162,588	U
Aircraft Support Equipment									
104	Weapons Range Support Equipment	A		58,116				58,116	U
105	Aircraft Support Equipment	A		120,324				120,324	U
106	Meteorological Equipment	A		29,253				29,253	U
107	DCRS/DPL	A		632				632	U
108	Airborne Mine Countermeasures	A		29,097				29,097	U
109	Aviation Support Equipment	A		39,099				39,099	U
Total Aviation Support Equipment				439,109				439,109	

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xxiv

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 04: Ordnance Support Equipment											
Ship Gun System Equipment											
110	Ship Gun Systems Equipment	A		5,572		5,300				5,300	U
Ship Missile Systems Equipment											
111	Ship Missile Support Equipment	A		143,570		276,503				276,503	U
112	Tomahawk Support Equipment	A		60,062		71,245				71,245	U
FBM Support Equipment											
113	Strategic Missile Systems Equip	A		209,583		240,694				240,694	U
ASW Support Equipment											
114	SSN Combat Control Systems	A		60,767		96,040				96,040	U
115	ASW Support Equipment	A		7,559		30,189				30,189	U
Other Ordnance Support Equipment											
116	Explosive Ordnance Disposal Equip	B		124,549		22,623				22,623	U
117	Items Less Than \$5 Million	A		10,759		9,906				9,906	U
Other Expendable Ordnance											
118	Submarine Training Device Mods	A									U
119	Training Device Mods	A		70,672		99,707				99,707	U
120	Surface Training Equipment	A									U
Total Ordnance Support Equipment				693,093		852,207				852,207	

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 04: Ordnance Support Equipment									
Ship Gun System Equipment									
110	Ship Gun Systems Equipment	A		6,191				6,191	U
Ship Missile Systems Equipment									
111	Ship Missile Support Equipment	A		320,446				320,446	U
112	Tomahawk Support Equipment	A		71,046				71,046	U
FBM Support Equipment									
113	Strategic Missile Systems Equip	A		215,138				215,138	U
ASW Support Equipment									
114	SSN Combat Control Systems	A		130,715				130,715	U
115	ASW Support Equipment	A		26,431				26,431	U
Other Ordnance Support Equipment									
116	Explosive Ordnance Disposal Equip	B		11,821		99,329		111,150	U
117	Items Less Than \$5 Million	A		6,243				6,243	U
Other Expendable Ordnance									
118	Submarine Training Device Mods	A		48,020				48,020	U
119	Training Device Mods	A							U
120	Surface Training Equipment	A		97,514				97,514	U
Total Ordnance Support Equipment				933,565		99,329		1,032,894	

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 05: Civil Engineering Support Equip											

Civil Engineering Support Equipment											
121	Passenger Carrying Vehicles	A		2,282		2,252		186		2,438	U
122	General Purpose Trucks	A		547		2,191				2,191	U
123	Construction & Maintenance Equip	A		7,256		2,164				2,164	U
124	Fire Fighting Equipment	A		15,321		14,705				14,705	U
125	Tactical Vehicles	B		766		2,497				2,497	U
126	Amphibious Equipment	A		8,682		12,517				12,517	U
127	Pollution Control Equipment	A		2,942		3,018				3,018	U
128	Items Under \$5 Million	A		15,553		14,403				14,403	U
129	Physical Security Vehicles	A		1,177		1,186				1,186	U
	Total Civil Engineering Support Equip			54,526		54,933		186		55,119	
Budget Activity 06: Supply Support Equipment											

Supply Support Equipment											
130	Materials Handling Equipment	A		11,387		18,805				18,805	U
131	Supply Equipment	A									U
132	Other Supply Support Equipment	A		6,674		10,469				10,469	U
133	First Destination Transportation	A		5,724		5,720				5,720	U
134	Special Purpose Supply Systems	A		69,098		211,714				211,714	U
	Total Supply Support Equipment			92,883		246,708				246,708	

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 05: Civil Engineering Support Equip									

Civil Engineering Support Equipment									
121	Passenger Carrying Vehicles	A		8,853				8,853	U
122	General Purpose Trucks	A		4,928				4,928	U
123	Construction & Maintenance Equip	A		18,527				18,527	U
124	Fire Fighting Equipment	A		13,569		630		14,199	U
125	Tactical Vehicles	B		14,917				14,917	U
126	Amphibious Equipment	A		7,676				7,676	U
127	Pollution Control Equipment	A		2,321				2,321	U
128	Items Under \$5 Million	A		12,459				12,459	U
129	Physical Security Vehicles	A		1,095				1,095	U
	Total Civil Engineering Support Equip			84,345		630		84,975	
Budget Activity 06: Supply Support Equipment									

Supply Support Equipment									
130	Materials Handling Equipment	A							U
131	Supply Equipment	A		16,023				16,023	U
132	Other Supply Support Equipment	A							U
133	First Destination Transportation	A		5,115		25		5,140	U
134	Special Purpose Supply Systems	A		295,471				295,471	U
	Total Supply Support Equipment			316,609		25		316,634	

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 07: Personnel & Command Support Equip -----											
Training Devices											
135	Training Support Equipment	A		22,871		7,468				7,468	U
136	Training and Education Equipment	A									U
Command Support Equipment											
137	Command Support Equipment	A		26,238		36,433				36,433	U
138	Education Support Equipment	A		874		3,180				3,180	U
139	Medical Support Equipment	A		2,108		4,790				4,790	U
141	Naval MIP Support Equipment	A		3,573		4,608				4,608	U
142	Operating Forces Support Equipment	A				5,655				5,655	U
143	C4ISR Equipment	A		24,459		9,929				9,929	U
144	Environmental Support Equipment	A		18,030		23,009				23,009	U
145	Physical Security Equipment	A		82,132		88,453				88,453	U
146	Enterprise Information Technology	A		87,214		99,094				99,094	U
Other											
149	Cancelled Account Adjustments	A		74							U
150	Next Generation Enterprise Service	A		106,165		99,014				99,014	U
999	Classified Programs			13,247		21,439		12,000		33,439	U
Total Personnel & Command Support Equip				386,985		403,072				415,072	

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xxix

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 07: Personnel & Command Support Equip -----									
Training Devices									
135	Training Support Equipment	A							U
136	Training and Education Equipment	A		9,504				9,504	U
Command Support Equipment									
137	Command Support Equipment	A		37,180		10,562		47,742	U
138	Education Support Equipment	A							U
139	Medical Support Equipment	A		4,128				4,128	U
141	Naval MIP Support Equipment	A		1,925				1,925	U
142	Operating Forces Support Equipment	A		4,777				4,777	U
143	C4ISR Equipment	A		9,073				9,073	U
144	Environmental Support Equipment	A		21,107				21,107	U
145	Physical Security Equipment	A		100,906				100,906	U
146	Enterprise Information Technology	A		67,544				67,544	U
Other									
149	Cancelled Account Adjustments	A							U
150	Next Generation Enterprise Service	A		98,216				98,216	U
999	Classified Programs			9,915		1,660		11,575	U
Total Personnel & Command Support Equip				364,275		12,222		376,497	

P-1C1: FY 2017 President's Budget (Published Version of PB Position), as of January 14, 2016 at 09:48:40

UNCLASSIFIED

Volume 1 - xxx

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2015 (Base & OCO)		FY 2016 Base Enacted		FY 2016 OCO Enacted		FY 2016 Total Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 08: Spares and Repair Parts											

Spares and Repair Parts											
151	Spares and Repair Parts	A	302,471		307,464				307,464		U
			-----		-----		-----		-----		
Total Spares and Repair Parts			302,471		307,464				307,464		
			-----		-----		-----		-----		
Total Other Procurement, Navy			6,405,148		6,484,257		12,186		6,496,443		

UNCLASSIFIED

Department of the Navy
 FY 2017 President's Budget
 Exhibit P-1 FY 2017 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

14 Jan 2016

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Base		FY 2017 OCO		FY 2017 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 08: Spares and Repair Parts									

Spares and Repair Parts									
151	Spares and Repair Parts	A	199,660				199,660		U
			-----			-----	-----		
	Total Spares and Repair Parts		199,660				199,660		
			-----			-----	-----		
	Total Other Procurement, Navy		6,338,861		124,206		6,463,067		

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • 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	0110	LM-2500 Gas Turbine.....	Volume 1 - 1
2	01	01	0120	Allison 501K Gas Turbine.....	Volume 1 - 11
3	01	01	0131	Surface Power Equipment.....	Volume 1 - 21
4	01	01	0140	Hybrid Electric Drive (HED).....	Volume 1 - 33
5	01	02	0200	Surface Combatant HM&E.....	Volume 1 - 39
6	01	06	0670	Other Navigation Equipment.....	Volume 1 - 67
7	01	08	0831	Sub Periscopes & Imaging Equip.....	Volume 1 - 115
8	01	09	0840	Sub Periscope, Imaging and Supt Equip Prog.....	Volume 1 - 143
9	01	09	0900	DDG Mod.....	Volume 1 - 187
10	01	09	0910	Firefighting Equipment.....	Volume 1 - 241
11	01	09	0925	Command and Control Switchboard.....	Volume 1 - 261
12	01	09	0933	LHA/LHD Midlife.....	Volume 1 - 269
13	01	09	0934	LCC 19/20 Extended Service Life Program.....	Volume 1 - 287
14	01	09	0935	Pollution Control Equipment.....	Volume 1 - 301
15	01	09	0941	Submarine Support Equipment.....	Volume 1 - 311
16	01	09	0942	Virginia Class Support Equipment.....	Volume 1 - 331

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
17	01	09	0944	LCS Class Support Equipment.....	Volume 1 - 363
18	01	09	0945	Submarine Batteries.....	Volume 1 - 379
19	01	09	0946	LPD Class Support Equipment.....	Volume 1 - 397
20	01	09	0947	DDG 1000 Class Support Equipment.....	Volume 1 - 419
21	01	09	0950	Strategic Platform Support Equip.....	Volume 1 - 427
22	01	09	0955	Deep Subm Sys Proj (DSSP) Equip.....	Volume 1 - 443
23	01	09	0960	CG Modernization.....	Volume 1 - 449
24	01	09	0970	LCAC.....	Volume 1 - 483
25	01	09	0977	Underwater EOD Programs.....	Volume 1 - 487
26	01	09	0981	Items less than \$5 Million.....	Volume 1 - 501
27	01	09	0989	Chemical Warfare Detectors.....	Volume 1 - 553
28	01	09	0990	Submarine Life Support System.....	Volume 1 - 573
29	01	10	1010	Reactor Power Units.....	Volume 1 - 583
30	01	10	1020	Reactor Components.....	Volume 1 - 587
31	01	11	1130	Diving and Salvage Equipment.....	Volume 1 - 591
32	01	12	1210	Standard Boats.....	Volume 1 - 613
33	01	13	1320	Other Ships Training Equipment.....	Volume 1 - 625
34	01	14	1445	Operating Forces IPE.....	Volume 1 - 629

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
35	01	15	1480	Nuclear Alterations.....	Volume 1 - 643
36	01	15	1600	LCS Common Mission Modules Equipment.....	Volume 1 - 647
37	01	15	1601	LCS MCM Mission Modules.....	Volume 1 - 663
38	01	15	1602	LCS ASW Mission Modules.....	Volume 1 - 675
39	01	15	1603	LCS SUW Mission Modules.....	Volume 1 - 687
40	01	15	1605	Remote Minehunting System (RMS).....	Volume 1 - 697
41	01	16	1610	LSD Midlife.....	Volume 1 - 705

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
42	02	02	2026	SPQ-9B Radar.....	Volume 2 - 1
43	02	02	2136	AN/SQQ-89 Surf ASW Cmbt Sys.....	Volume 2 - 11
44	02	02	2147	SSN Acoustics.....	Volume 2 - 35
45	02	02	2150	SSN Acoustic Equipment.....	Volume 2 - 65
46	02	02	2176	Undersea Warfare Support Equipment.....	Volume 2 - 109
47	02	02	2181	Sonar Switches and Transducers.....	Volume 2 - 119

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
48	02	03	2210	Submarine Acoustic Warfare System.....	Volume 2 - 129
49	02	03	2213	Surface Ship Torpedo Def (SSTD).....	Volume 2 - 157
50	02	03	2225	Fixed Surveillance System.....	Volume 2 - 177
51	02	03	2237	SURTASS.....	Volume 2 - 181
52	02	03	2246	Maritime Patrol and Reconnaissance Force.....	Volume 2 - 211
53	02	04	2312	AN/SLQ-32.....	Volume 2 - 225
54	02	05	2360	Shipboard IW Exploit.....	Volume 2 - 259
55	02	05	2361	Automatic Identification System (AIS).....	Volume 2 - 299
56	02	06	2560	Submarine Supt Equip Prog.....	Volume 2 - 303
57	02	07	2606	Cooperative Engagement Capability.....	Volume 2 - 341
58	02	07	2608	Trusted Information System (TIS).....	Volume 2 - 365
59	02	07	2611	Naval Tact Cmd Supt Sys (NTCSS).....	Volume 2 - 371
60	02	07	2614	Adv Tact Data Link Sys (ATDLS).....	Volume 2 - 381
61	02	07	2618	Navy Command and Control System (NCCS).....	Volume 2 - 395
62	02	07	2622	Minesweeping System Replacement.....	Volume 2 - 403
63	02	07	2624	Shallow Water Mine CM Ship.....	Volume 2 - 423
64	02	07	2657	NAVSTAR GPS Receivers (Space).....	Volume 2 - 431
65	02	07	2666	American Forces Radio and TV Service (AFRTS).....	Volume 2 - 441

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
66	02	07	2676	Strategic Platform Support Equip.....	Volume 2 - 447
67	02	08	2762	Other Training Equipment.....	Volume 2 - 451
68	02	09	2815	MATCALs.....	Volume 2 - 469
69	02	09	2820	Ashore ATC Equipment.....	Volume 2 - 481
70	02	09	2830	Afloat ATC Equipment.....	Volume 2 - 529
71	02	09	2831	Shipboard Air Traffic Control.....	Volume 2 - 567
72	02	09	2832	Automatic Carrier Landing System.....	Volume 2 - 575
73	02	09	2840	National Air Space System.....	Volume 2 - 609
74	02	09	2845	Fleet Air Traffic Control Systems.....	Volume 2 - 633
75	02	09	2846	Landing Systems.....	Volume 2 - 639
76	02	09	2851	ID Systems.....	Volume 2 - 653
77	02	09	2876	Naval Mission Planning Systems.....	Volume 2 - 677
78	02	10	2804	Depl JT Cmd & Control (DJC2).....	Volume 2 - 683
79	02	10	2900	Maritime Integrated Broadcast System.....	Volume 2 - 689
80	02	10	2906	Tactical/Mobile C4I Systems.....	Volume 2 - 701
81	02	10	2914	Distributed Common Ground System-Navy (DCGS-N).....	Volume 2 - 713
82	02	10	2915	CANES.....	Volume 2 - 739
83	02	10	2920	RADIAC.....	Volume 2 - 755

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
84	02	10	2925	CANES Intell.....	Volume 2 - 765
85	02	10	2940	Gen Purp Elec Test Equip (GPETE).....	Volume 2 - 779
86	02	10	2950	Network Tactical Common Data Link (CDL).....	Volume 2 - 785
87	02	10	2960	Integ Combat System Test Facility.....	Volume 2 - 789
88	02	10	2970	EMI Control Instrumentation.....	Volume 2 - 793
89	02	10	2980	Items less than \$5 Million.....	Volume 2 - 797
90	02	11	3010	Shipboard Tactical Comms.....	Volume 2 - 827
91	02	11	3050	Ship Communications Automation.....	Volume 2 - 837
92	02	11	3057	Communications Items under \$5M.....	Volume 2 - 861
93	02	12	3107	Submarine Broadcast Support.....	Volume 2 - 869
94	02	12	3130	Submarine Communication Equipment.....	Volume 2 - 891
95	02	13	3215	Satellite Communications Systems.....	Volume 2 - 925
96	02	13	3216	Navy Multiband Terminal (NMT).....	Volume 2 - 941
97	02	14	3302	JCS Communications Equipment.....	Volume 2 - 951
98	02	14	3303	Electrical Power Systems.....	Volume 2 - 955
99	02	15	3415	Info Systems Security Program (ISSP).....	Volume 2 - 963
100	02	15	3417	MIO Intel Exploitation Team.....	Volume 2 - 995
101	02	16	3501	Cryptologic Communications Equip.....	Volume 2 - 999

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
102	02	17	3620	Coast Guard Equipment.....	Volume 2 - 1009

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
103	03	01	4048	Sonobuoys - All Types.....	Volume 3 - 1
104	03	03	4204	Weapons Range Support Equipment.....	Volume 3 - 13
105	03	03	4213	Aircraft Support Equipment.....	Volume 3 - 21
106	03	03	4226	Meteorological Equipment.....	Volume 3 - 57
107	03	03	4242	DCRS/DPL.....	Volume 3 - 65
108	03	03	4248	Aviation Mine Countermeasures.....	Volume 3 - 69
109	03	03	4268	Aviation Support Equipment.....	Volume 3 - 101

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
110	04	02	5111	Ship Gun Systems Equipment.....	Volume 4 - 1
111	04	03	5231	Ship Missile Support Equipment.....	Volume 4 - 7
112	04	03	5253	Tomahawk Support Equipment.....	Volume 4 - 49
113	04	04	5358	Strategic Missile Systems Equip.....	Volume 4 - 55
114	04	05	5420	SSN Combat Control Systems.....	Volume 4 - 83
115	04	05	5429	ASW Support Equipment.....	Volume 4 - 113
116	04	06	5509	Explosive Ordnance Disposal Equip.....	Volume 4 - 125
117	04	06	5543	Items Less Than \$5 Million.....	Volume 4 - 143
118	04	07	5661	Submarine Training Device Mods.....	Volume 4 - 149
119	04	07	5662	Training Device Mods.....	Volume 4 - 173
120	04	07	5664	Surface Training Equipment.....	Volume 4 - 187

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
121	05	01	6003	Passenger Carrying Vehicles.....	Volume 5 - 1
122	05	01	6007	General Purpose Trucks.....	Volume 5 - 11
123	05	01	6024	Construction & Maint Equip.....	Volume 5 - 19
124	05	01	6027	Fire Fighting Equipment.....	Volume 5 - 29
125	05	01	6028	Tactical Vehicles.....	Volume 5 - 37
126	05	01	6033	Amphibious Equipment.....	Volume 5 - 41
127	05	01	6058	Pollution Control Equipment.....	Volume 5 - 49
128	05	01	6060	Items under \$5 million.....	Volume 5 - 53
129	05	01	6075	Physical Security Vehicles.....	Volume 5 - 63

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
130	06	01	7015	Materials Handling Equipment.....	Volume 5 - 67
131	06	01	7025	Supply Equipment.....	Volume 5 - 73

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
132	06	01	7050	Other Supply Support Equipment.....	Volume 5 - 81
133	06	01	7066	First Destination Transportation.....	Volume 5 - 85
134	06	01	7069	Special Purpose Supply Systems.....	Volume 5 - 89

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
135	07	01	8081	Training Support Equipment.....	Volume 5 - 93
136	07	01	8101	Training and Education Equipment.....	Volume 5 - 109
137	07	02	8106	Command Support Equipment.....	Volume 5 - 119
138	07	02	8108	Education Support Equipment.....	Volume 5 - 141
139	07	02	8109	Medical Support Equipment.....	Volume 5 - 149
141	07	02	8114	Naval MIP Support Equipment.....	Volume 5 - 157
142	07	02	8118	Operating Forces Supt Equip.....	Volume 5 - 161
143	07	02	8120	C4ISR Equipment.....	Volume 5 - 167
144	07	02	8126	Environmental Support Equipment.....	Volume 5 - 175
145	07	02	8128	Physical Security Equipment.....	Volume 5 - 185

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
146	07	02	8161	Enterprise Information Technology.....	Volume 5 - 195
149	07	05	8150	Cancelled Account Adjustments.....	Volume 5 - 211
150	07	05	8164	Next Generation Enterprise Service.....	Volume 5 - 213

Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
151	08	01	9020	Spares and Repair Parts.....	Volume 5 - 217

UNCLASSIFIED

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • 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	53	02	04.....	Volume 2 - 225
AN/SQQ-89 Surf ASW Cmbt Sys	2136	43	02	02.....	Volume 2 - 11
ASW Support Equipment	5429	115	04	05.....	Volume 4 - 113
Adv Tact Data Link Sys (ATDLS)	2614	60	02	07.....	Volume 2 - 381
Afloat ATC Equipment	2830	70	02	09.....	Volume 2 - 529
Aircraft Support Equipment	4213	105	03	03.....	Volume 3 - 21
Allison 501K Gas Turbine	0120	2	01	01.....	Volume 1 - 11
American Forces Radio and TV Service (AFRTS)	2666	65	02	07.....	Volume 2 - 441
Amphibious Equipment	6033	126	05	01.....	Volume 5 - 41
Ashore ATC Equipment	2820	69	02	09.....	Volume 2 - 481
Automatic Carrier Landing System	2832	72	02	09.....	Volume 2 - 575
Automatic Identification System (AIS)	2361	55	02	05.....	Volume 2 - 299
Aviation Mine Countermeasures	4248	108	03	03.....	Volume 3 - 69
Aviation Support Equipment	4268	109	03	03.....	Volume 3 - 101
C4ISR Equipment	8120	143	07	02.....	Volume 5 - 167
CANES	2915	82	02	10.....	Volume 2 - 739
CANES Intell	2925	84	02	10.....	Volume 2 - 765

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
CG Modernization	0960	23	01	09.....	Volume 1 - 449
Cancelled Account Adjustments	8150	149	07	05.....	Volume 5 - 211
Chemical Warfare Detectors	0989	27	01	09.....	Volume 1 - 553
Coast Guard Equipment	3620	102	02	17.....	Volume 2 - 1009
Command Support Equipment	8106	137	07	02.....	Volume 5 - 119
Command and Control Switchboard	0925	11	01	09.....	Volume 1 - 261
Communications Items under \$5M	3057	92	02	11.....	Volume 2 - 861
Construction & Maint Equip	6024	123	05	01.....	Volume 5 - 19
Cooperative Engagement Capability	2606	57	02	07.....	Volume 2 - 341
Cryptologic Communications Equip	3501	101	02	16.....	Volume 2 - 999
DCRS/DPL	4242	107	03	03.....	Volume 3 - 65
DDG 1000 Class Support Equipment	0947	20	01	09.....	Volume 1 - 419
DDG Mod	0900	9	01	09.....	Volume 1 - 187
Deep Subm Sys Proj (DSSP) Equip	0955	22	01	09.....	Volume 1 - 443
Depl JT Cmd & Control (DJC2)	2804	78	02	10.....	Volume 2 - 683
Distributed Common Ground System-Navy (DCGS-N)	2914	81	02	10.....	Volume 2 - 713
Diving and Salvage Equipment	1130	31	01	11.....	Volume 1 - 591
EMI Control Instrumentation	2970	88	02	10.....	Volume 2 - 793
Education Support Equipment	8108	138	07	02.....	Volume 5 - 141
Electrical Power Systems	3303	98	02	14.....	Volume 2 - 955

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
Enterprise Information Technology	8161	146	07	02.....	Volume 5 - 195
Environmental Support Equipment	8126	144	07	02.....	Volume 5 - 175
Explosive Ordnance Disposal Equip	5509	116	04	06.....	Volume 4 - 125
Fire Fighting Equipment	6027	124	05	01.....	Volume 5 - 29
Firefighting Equipment	0910	10	01	09.....	Volume 1 - 241
First Destination Transportation	7066	133	06	01.....	Volume 5 - 85
Fixed Surveillance System	2225	50	02	03.....	Volume 2 - 177
Fleet Air Traffic Control Systems	2845	74	02	09.....	Volume 2 - 633
Gen Purp Elec Test Equip (GPETE)	2940	85	02	10.....	Volume 2 - 779
General Purpose Trucks	6007	122	05	01.....	Volume 5 - 11
Hybrid Electric Drive (HED)	0140	4	01	01.....	Volume 1 - 33
ID Systems	2851	76	02	09.....	Volume 2 - 653
Info Systems Security Program (ISSP)	3415	99	02	15.....	Volume 2 - 963
Integ Combat System Test Facility	2960	87	02	10.....	Volume 2 - 789
Items Less Than \$5 Million	5543	117	04	06.....	Volume 4 - 143
Items less than \$5 Million	0981	26	01	09.....	Volume 1 - 501
Items less than \$5 Million	2980	89	02	10.....	Volume 2 - 797
Items under \$5 million	6060	128	05	01.....	Volume 5 - 53
JCS Communications Equipment	3302	97	02	14.....	Volume 2 - 951
LCAC	0970	24	01	09.....	Volume 1 - 483

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
LCC 19/20 Extended Service Life Program	0934	13	01	09.....	Volume 1 - 287
LCS ASW Mission Modules	1602	38	01	15.....	Volume 1 - 675
LCS Class Support Equipment	0944	17	01	09.....	Volume 1 - 363
LCS Common Mission Modules Equipment	1600	36	01	15.....	Volume 1 - 647
LCS MCM Mission Modules	1601	37	01	15.....	Volume 1 - 663
LCS SUW Mission Modules	1603	39	01	15.....	Volume 1 - 687
LHA/LHD Midlife	0933	12	01	09.....	Volume 1 - 269
LM-2500 Gas Turbine	0110	1	01	01.....	Volume 1 - 1
LPD Class Support Equipment	0946	19	01	09.....	Volume 1 - 397
LSD Midlife	1610	41	01	16.....	Volume 1 - 705
Landing Systems	2846	75	02	09.....	Volume 2 - 639
MATCALs	2815	68	02	09.....	Volume 2 - 469
MIO Intel Exploitation Team	3417	100	02	15.....	Volume 2 - 995
Maritime Integrated Broadcast System	2900	79	02	10.....	Volume 2 - 689
Maritime Patrol and Reconnaissance Force	2246	52	02	03.....	Volume 2 - 211
Materials Handling Equipment	7015	130	06	01.....	Volume 5 - 67
Medical Support Equipment	8109	139	07	02.....	Volume 5 - 149
Meteorological Equipment	4226	106	03	03.....	Volume 3 - 57
Minesweeping System Replacement	2622	62	02	07.....	Volume 2 - 403
NAVSTAR GPS Receivers (Space)	2657	64	02	07.....	Volume 2 - 431

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
National Air Space System	2840	73	02	09.....	Volume 2 - 609
Naval MIP Support Equipment	8114	141	07	02.....	Volume 5 - 157
Naval Mission Planning Systems	2876	77	02	09.....	Volume 2 - 677
Naval Tact Cmd Supt Sys (NTCSS)	2611	59	02	07.....	Volume 2 - 371
Navy Command and Control System (NCCS)	2618	61	02	07.....	Volume 2 - 395
Navy Multiband Terminal (NMT)	3216	96	02	13.....	Volume 2 - 941
Network Tactical Common Data Link (CDL)	2950	86	02	10.....	Volume 2 - 785
Next Generation Enterprise Service	8164	150	07	05.....	Volume 5 - 213
Nuclear Alterations	1480	35	01	15.....	Volume 1 - 643
Operating Forces IPE	1445	34	01	14.....	Volume 1 - 629
Operating Forces Supt Equip	8118	142	07	02.....	Volume 5 - 161
Other Navigation Equipment	0670	6	01	06.....	Volume 1 - 67
Other Ships Training Equipment	1320	33	01	13.....	Volume 1 - 625
Other Supply Support Equipment	7050	132	06	01.....	Volume 5 - 81
Other Training Equipment	2762	67	02	08.....	Volume 2 - 451
Passenger Carrying Vehicles	6003	121	05	01.....	Volume 5 - 1
Physical Security Equipment	8128	145	07	02.....	Volume 5 - 185
Physical Security Vehicles	6075	129	05	01.....	Volume 5 - 63
Pollution Control Equipment	0935	14	01	09.....	Volume 1 - 301
Pollution Control Equipment	6058	127	05	01.....	Volume 5 - 49

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
RADIAC	2920	83	02	10.....	Volume 2 - 755
Reactor Components	1020	30	01	10.....	Volume 1 - 587
Reactor Power Units	1010	29	01	10.....	Volume 1 - 583
Remote Minehunting System (RMS)	1605	40	01	15.....	Volume 1 - 697
SPQ-9B Radar	2026	42	02	02.....	Volume 2 - 1
SSN Acoustic Equipment	2150	45	02	02.....	Volume 2 - 65
SSN Acoustics	2147	44	02	02.....	Volume 2 - 35
SSN Combat Control Systems	5420	114	04	05.....	Volume 4 - 83
SURTASS	2237	51	02	03.....	Volume 2 - 181
Satellite Communications Systems	3215	95	02	13.....	Volume 2 - 925
Shallow Water Mine CM Ship	2624	63	02	07.....	Volume 2 - 423
Ship Communications Automation	3050	91	02	11.....	Volume 2 - 837
Ship Gun Systems Equipment	5111	110	04	02.....	Volume 4 - 1
Ship Missile Support Equipment	5231	111	04	03.....	Volume 4 - 7
Shipboard Air Traffic Control	2831	71	02	09.....	Volume 2 - 567
Shipboard IW Exploit	2360	54	02	05.....	Volume 2 - 259
Shipboard Tactical Comms	3010	90	02	11.....	Volume 2 - 827
Sonar Switches and Transducers	2181	47	02	02.....	Volume 2 - 119
Sonobuoys - All Types	4048	103	03	01.....	Volume 3 - 1
Spares and Repair Parts	9020	151	08	01.....	Volume 5 - 217

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
Special Purpose Supply Systems	7069	134	06	01.....	Volume 5 - 89
Standard Boats	1210	32	01	12.....	Volume 1 - 613
Strategic Missile Systems Equip	5358	113	04	04.....	Volume 4 - 55
Strategic Platform Support Equip	0950	21	01	09.....	Volume 1 - 427
Strategic Platform Support Equip	2676	66	02	07.....	Volume 2 - 447
Sub Periscope, Imaging and Supt Equip Prog	0840	8	01	09.....	Volume 1 - 143
Sub Periscopes & Imaging Equip	0831	7	01	08.....	Volume 1 - 115
Submarine Acoustic Warfare System	2210	48	02	03.....	Volume 2 - 129
Submarine Batteries	0945	18	01	09.....	Volume 1 - 379
Submarine Broadcast Support	3107	93	02	12.....	Volume 2 - 869
Submarine Communication Equipment	3130	94	02	12.....	Volume 2 - 891
Submarine Life Support System	0990	28	01	09.....	Volume 1 - 573
Submarine Support Equipment	0941	15	01	09.....	Volume 1 - 311
Submarine Supt Equip Prog	2560	56	02	06.....	Volume 2 - 303
Submarine Training Device Mods	5661	118	04	07.....	Volume 4 - 149
Supply Equipment	7025	131	06	01.....	Volume 5 - 73
Surface Combatant HM&E	0200	5	01	02.....	Volume 1 - 39
Surface Power Equipment	0131	3	01	01.....	Volume 1 - 21
Surface Ship Torpedo Def (SSTD)	2213	49	02	03.....	Volume 2 - 157
Surface Training Equipment	5664	120	04	07.....	Volume 4 - 187

UNCLASSIFIED

UNCLASSIFIED

Navy • President's Budget Submission FY 2017 • Procurement

Line Item Title	Line Item Number	Line #	BA	BSA	Page
Tactical Vehicles	6028	125	05	01.....	Volume 5 - 37
Tactical/Mobile C4I Systems	2906	80	02	10.....	Volume 2 - 701
Tomahawk Support Equipment	5253	112	04	03.....	Volume 4 - 49
Training Device Mods	5662	119	04	07.....	Volume 4 - 173
Training Support Equipment	8081	135	07	01.....	Volume 5 - 93
Training and Education Equipment	8101	136	07	01.....	Volume 5 - 109
Trusted Information System (TIS)	2608	58	02	07.....	Volume 2 - 365
Undersea Warfare Support Equipment	2176	46	02	02.....	Volume 2 - 109
Underwater EOD Programs	0977	25	01	09.....	Volume 1 - 487
Virginia Class Support Equipment	0942	16	01	09.....	Volume 1 - 331
Weapons Range Support Equipment	4204	104	03	03.....	Volume 3 - 13

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment

P-1 Line Item Number / Title:
0110 / LM-2500 Gas Turbine

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 **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	139.837	7.822	4.881	-	-	-	-	-	-	-	-	152.540
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	139.837	7.822	4.881	-	-	-	-	-	-	-	-	152.540
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	139.837	7.822	4.881	-	-	-	-	-	-	-	-	152.540

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Beginning in FY17 and out, The Department has consolidated all BLI 0110 LM2500 Gas Turbine requirements and efforts into the Surface Power Equipment (BLI 0131).

The FY 2016 funding request was reduced by \$3.208 million to account for the availability of prior year execution balances.

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

[P40A / GA009 MODIFICATION PROGRAM]: GA009 - MODIFICATION KIT PROGRAM

This cost code procures modification kits listed below for the LM2500 Gas Turbine Engine. These modifications increase reliability and fleet readiness through component upgrades which improves the Mean Time Between Failure (MTBF). The modification kits are procured based on historical usage rates, re-packaged into individual kits, and sent to either a depot to be installed during engine overhauls or to Regional Maintenance Centers for installation. No procurement quantities are a result of procuring various kits of various costs. The kits included in the cost code are as follows:

- Accelerometers (Vibration Monitor)
- Compressor Rear Frame Mid-flange Fastener installation
- C-Sump Lubrication Supply Line
- Power Turbine Upgraded Speed Sensor
- Improved Drain Shutoff Valve
- Turbine Mid-Frame Modification
- 7B Piping Modification
- 5-Element to 6-Element Pump Conversion
- T5.4 Flexible Thermo Harness
- Mid Flange Fastener

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment		P-1 Line Item Number / Title: 0110 / LM-2500 Gas Turbine
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	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / GA010 GAS GENERATOR]: GA010 - GAS GENERATOR This cost element procures the LM2500 single shank propulsion gas turbine for the DDG-51 & LCS-2 class ships and the LM2500+ single shank propulsion gas turbine for the LHD8 and LHA6-LHA8. The programs projected FY-18 in-service population of single shank propulsion gas turbine engines is estimated to be 382 due to new construction. Breakdown of ship class spare procurement is listed below. The procurement of these engines includes all required shipping/storage containers. LM2500 gas generator procurements are presently scheduled to occur every other year.</p> <p>DDG LM2500 Single Shank Based on experience with 35 years of usage demand data on the LM2500 Engine and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 36 spares are required to support the fleet requirements. Current onhand is 28 with a requirement for eight (8) additional gas generator units to be procured IAW projected class population in FY19.</p> <p>LCS 2 LM2500 Single Shank. Based on experience with 35 years of usage demand data on the LM2500 Engine and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 3 spares are required to support the fleet requirements. Current onhand is 1 with one (1) procured in May FY12 which leaves the requirement for one (1) additional gas generator unit to be procured IAW projected class population in FY19.</p> <p>LHD8/LHA6-LHA8 LM2500+ Single Shank. Based on experience with 35 years of usage demand data on the LM2500 Engine and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 2 spares are required to support the fleet requirements. Current onhand is 1, which leaves the requirement for one (1) additional gas generator to be procured IAW projected class population. The program has budgeted to procure one (1) Power Turbine Assembly in FY18 to meet the baseline requirement. This engine represents a significantly different configuration than the standard LM2500 Single Shank Engine procured in previous fiscal years.</p> <p>LM2500 Hot Section Kits Are procured as required from the below list per quarterly failure analysis and maintained to replace High Pressure Turbine (HPT) components beyond economical repair (BER). Shortages of replacement blades increase engine repair turn-around time (RTAT) during engine refurbishment/repair as a result of material shortages.</p> <p>Procurement quantities are a result of procuring various kits of various costs. The kits included in the cost code are as follows: --HPT Shrouds --HPT Seal Assembly --HPT Blades --HPT Nozzles --Compressor Blades</p> <p>[P40A / GA012 CONTROL SYSTEMS MODIFICATIONS]: GA012 - CONTROL SYSTEM MODIFICATIONS This cost code funds the procurement and installation of the Aft Steering Local Control Unit and Damage Control Hard Drives following control system modifications: Aft steering local control unit single board computers are currently obsolete and require replacement. Installation is required to be completed on 24 ships. Installations do not require CNO availabilities. Installations will be accomplished during pier side availability by NSWCCD Philadelphia. There are 4 kits required per ship. The kits include the following hardware: single board computer, daughter board, transceiver, power cables, and associated software packages. Current Damage Control Workstation hard drives are currently obsolete and require replacement. In order to maintain commonality in configuration a one-time bulk buy in FY12 is required as vendor is phasing-out the production of this unit. Installation is required to be completed on 24 ships. There are seven (7) hard drives required per ship. Installations do not require CNO availabilities. Installations will be accomplished during pier side availability by NSWCCD Philadelphia.</p> <p>[P40A / GA015 LM2500 DIGITAL FUEL CONTROL]: GA015 - DIGITAL FUEL CONTROL (DFC)</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment		P-1 Line Item Number / Title: 0110 / LM-2500 Gas Turbine
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	Item MDAP/MAIS Code(s): N/A	
<p>This cost code procures the Digital Fuel Control (DFC) shipsets, ancillary equipment and install material to support the CG/DDG modernization schedules. Procurement and installations are budgeted to correspond with CNO ship availabilities. One DFC Kit is required to upgrade each of the four LM2500 engines, which makes one DFC shipset.</p> <p>The DFC is the most significant change to the LM2500 engine since its inception into the USN that addresses obsolescence components which accounted for approximately 40% of all engine failures. This modification is estimated to be 75% more reliable than the old system.</p> <p>This upgrade replaces the existing Hydro-mechanical main fuel control (MFC) system which was designed for aircraft; with a Digital Fuel Control (DFC) system designed for military marine environment. This modification increases engine reliability, decreases periodic maintenance, enhances operational functions, and provides an automatic stall detection and shutdown capability.</p> <p>[P40A / GA016 MANAGEMENT ENERGY INITIATIVES]: GA016 - MANAGEMENT ENERGY INITIATIVES FY15 funds for energy initiatives realigned to Surface Combatant HM&E, Ships Support Equipment and Maritime Energy Initiatives (BLI 0200, L7027) to more effectively meet the Departments energy initiatives goals.</p> <p>[P40A / GA830 PRODUCTION ENGINEERING]: GA830 - PRODUCTION ENGINEERING The review and approval of any production contract technical documentation, or the separate development of this documentation to include Technical Manuals, Signal Flow Diagrams, Planned Maintenance System (PMS), Level III Production Drawings, Provisioning Technical Documentation (PTD), Program Support Data, Allowance Parts Lists (APL's) and engineering in support of final design reviews.</p> <p>[P3A / GA015 DIGITAL FUEL CONTROL SHIPSET]: GA015 - DIGITAL FUEL CONTROL (DFC) This cost element procures the Digital Fuel Control (DFC) shipsets, ancillary equipment and install material to support the CG/DDG modernization schedules.</p> <p>One DFC Kit is required to upgrade each of the four DDG class LM2500 engines, which makes one DFC shipset.</p> <p>The DFC is the most significant change to the LM2500 engine since its inception into the USN that addresses obsolescence components which accounted for approximately 40% of all engine failures. In summary this modification is estimated to be 75% more reliable than the old system.</p> <p>This upgrade replaces the existing Hydro-mechanical main fuel control (MFC) system which was designed for aircraft; with a Digital Fuel Control (DFC) system designed for military marine environment. This modification increases engine reliability, decreases periodic maintenance, enhances operational functions, and provides an automatic stall detection and shutdown capability.</p> <p>DFC ship-set procurement cost are updated based on actual prior year contract award prices.</p> <p>GA6IN - INSTALLATION FOR DIGITAL FUEL CONTROL (DFC) GA015 FY17 planned installation of the FY16 procured units will be reflected in the Surface Power Equipment (BLI 0131) exhibit.</p> <p>This cost element funds the installation of Cost element GA015-Digital Fuel Control (DFC) shipsets as part of the CG/DDG HM&E modernization program. This includes pre-assembly at NSWCCD Philadelphia, shipping to installation location, shipboard installation, training, post installation operational testing and associated travel cost.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment

P-1 Line Item Number / Title:
0110 / LM-2500 Gas Turbine

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 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	LM-2500 Gas Turbine	P-5a		- / 97.069	- / 1.907	- / 0.964	- / -	- / -	- / -
P-3a	1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL (TBD)			- / 42.768	- / 5.915	- / 3.917	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 139.837	- / 7.822	- / 4.881	- / -	- / -	- / -

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	LM-2500 Gas Turbine	P-5a		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL (TBD)			- / -	- / -	- / -	- / -	- / -	- / 52.600
P-40	Total Gross/Weapon System Cost			- / -	- / -	- / -	- / -	- / -	- / 152.540

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.
 Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 Beginning in FY17 and out, The Department has consolidated all BLI 0110 LM2500 Gas Turbine requirements and efforts into the Surface Power Equipment (BLI 0131).

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy																Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1						P-1 Line Item Number / Title: 0110 / LM-2500 Gas Turbine						Aggregated Items Title: LM-2500 Gas Turbine ⁽¹⁾								
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) GA009 MODIFICATION PROGRAM																				
1.1) MODIFICATION KIT PROGRAM	A		-	-	29.525	-	-	0.483	-	-	0.430	-	-	-	-	-	-	-	-	-
Subtotal: 1) GA009 MODIFICATION PROGRAM			-	-	29.525	-	-	0.483	-	-	0.430	-	-	-	-	-	-	-	-	-
2) GA010 GAS GENERATOR ⁽²⁾																				
2.1) GAS GENERATOR ^(†)	A		13,136K	3	39.407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3) LM 2500 HOT SECTION KITS ⁽³⁾	A		-	-	5.776	-	-	1.164	-	-	0.335	-	-	-	-	-	-	-	-	-
Subtotal: 2) GA010 GAS GENERATOR			-	-	45.183	-	-	1.164	-	-	0.335	-	-	-	-	-	-	-	-	-
3) GA012 CONTROL SYSTEMS MODIFICATIONS																				
3.1) CONTROL SYSTEMS MODIFICATIONS	A		-	-	14.749	-	-	0.110	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) GA012 CONTROL SYSTEMS MODIFICATIONS			-	-	14.749	-	-	0.110	-	-	-	-	-	-	-	-	-	-	-	-
4) GA015 LM2500 DIGITAL FUEL CONTROL																				
4.1) ANCLLARY EQUIPMENT/ INSTALLATION MATERIALS	A		-	-	0.214	-	-	0.030	-	-	0.067	-	-	-	-	-	-	-	-	-
Subtotal: 4) GA015 LM2500 DIGITAL FUEL CONTROL			-	-	0.214	-	-	0.030	-	-	0.067	-	-	-	-	-	-	-	-	-
5) GA016 MANAGEMENT ENERGY INITIATIVES ⁽⁴⁾																				
5.1) ONLINE WATERWASH GTM ^(†)	A		467,500.00	2	0.935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.2) LM 2500 FUEL EFFICIENCY IMPROVEMENTS	A		-	-	2.318	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) GA016 MANAGEMENT ENERGY INITIATIVES			-	-	3.253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6) GA830 PRODUCTION ENGINEERING																				
6.1) PRODUCTION ENGINEERING	A		-	-	4.145	-	-	0.120	-	-	0.132	-	-	-	-	-	-	-	-	-
Subtotal: 6) GA830 PRODUCTION ENGINEERING			-	-	4.145	-	-	0.120	-	-	0.132	-	-	-	-	-	-	-	-	-
Total			-	-	97.069	-	-	1.907	-	-	0.964	-	-	-	-	-	-	-	-	-

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

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0110 / LM-2500 Gas Turbine	Aggregated Items Title: LM-2500 Gas Turbine ⁽¹⁾

Footnotes:

- ⁽¹⁾ The FY 2016 funding request was reduced by \$3.208 million to account for the availability of prior year execution balances.
- ⁽²⁾ * The cost estimates for all engine procurements between FY14-FY19 are based on the Rough Order of Magnitude pricing provided by General Electric. The program will update the actual costs during the FY the contract is awarded.
- ⁽³⁾ GA010 Gas Generator, LM2500 HOT SECTION KITS: Changes between FY15 and FY16 is driven by increased demand for LM2500 Hot Section materials, which must be procured a year in advance due to GE's twelve month lead time. The increase demand is due to the number of LM2500 overhauls, driven by increasing number of engines with high operating hours, along with increased amount of unserviceable hot section material. 50% of 1st stage blades and nozzles are now found to be unserviceable during overhaul, up from historical levels of roughly 20%, due to the higher operating hours and increased engine performance requirements. Each individual LM2500 gas turbine has eighty eight (88) 1st stage turbine blades and thirty two (32) 1st stage nozzles; replacement part costs are on average \$12K a unit for 1st stage blades and \$22K a unit for 1st stage nozzles. The basis for the FY15 hot section material requirement of \$1.164M is 44 1st stage blades and 16 1st stage nozzles replacements during two (2) FY16 overhauls, at a cost of \$880K per overhaul. In FY15 the program is able to offset approximately \$600K of this requirement by using material recovered from decommissioned LM2500 assets, leaving an overall requirement of \$1.16M vice \$1.76M. The basis for the FY16 hot section material requirement of \$335K for FY16, which will buy 27 1st stage blades replacements during FY17 overhauls.
- ⁽⁴⁾ FY15 funds for energy initiatives realigned to Surface Combatant HM&E, Ships Support Equipment and Maritime Energy Initiatives (BLI 0200, L7027) to more effectively meet the Departments energy initiatives goals.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1				P-1 Line Item Number / Title: 0110 / LM-2500 Gas Turbine				Aggregated Items: LM-2500 Gas Turbine ⁽¹⁾				
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) GA010 GAS GENERATOR												
2.1) GAS GENERATOR		2011	GE / CINCINNATI, OH	SS / BOA	NAVSUP WSS, Mechanicsburg PA	Sep 2011	Mar 2013	1	3,601K	Y		
2.1) GAS GENERATOR		2013	GE / CINCINNATI, OH	SS / BOA	NAVSUP WSS, Mechanicsburg PA	May 2013	Nov 2014	1	3,905K	Y		
5) GA016 MANAGEMENT ENERGY INITIATIVES												
5.1) ONLINE WATERWASH GTM		2012	VARIOUS / VARIOUS	SS / FFP	NSWC, PHILA	May 2012	Jul 2012	2	97,000.00	Y		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1				P-1 Line Item Number / Title: 0110 / LM-2500 Gas Turbine				Modification Number / Title: 1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	42.768	5.915	3.917	-	-	-	-	-	-	-	-	52.600
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	42.768	5.915	3.917	-	-	-	-	-	-	-	-	52.600
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	42.768	5.915	3.917	-	-	-	-	-	-	-	-	52.600
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[GA015 DIGITAL FUEL CONTROL SHIPSET] This cost code procures the Digital Fuel Control (DFC) shipsets, ancillary equipment and install material to support the CG/DDG modernization schedules.

One DFC Kit is required to upgrade each of the four DDG class LM2500 engines, which makes one DFC shipset.

The DFC is the most significant change to the LM2500 engine since its inception into the USN that addresses obsolescence components which accounted for approximately 40% of all engine failures. In summary this modification is estimated to be 75% more reliable than old system.

This upgrade replaces the existing Hydro-mechanical main fuel control (MFC) system which was designed for aircraft; with a Digital Fuel Control (DFC) system designed for military marine environment. This modification increases engine reliability, decreases periodic maintenance, enhances operational functions, and provides an automatic stall detection and shutdown capability.

DFC ship-set procurement cost are updated based on actual prior year contract award prices.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1					P-1 Line Item Number / Title: 0110 / LM-2500 Gas Turbine					Modification Number / Title: 1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1:</i> GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL													
B Kits													
Recurring													
1.1.1) GA015 DIGITAL FUEL CONTROL SHIPSET - NonOrganic ⁽⁵⁾	36 / 41.588	3 / 5.359	2 / 3.761	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 50.708	
<i>Subtotal: Recurring</i>	- / 41.588	- / 5.359	- / 3.761	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 50.708	
<i>Subtotal: GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL</i>	36 / 41.588	3 / 5.359	2 / 3.761	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 50.708	
<i>Subtotal: Procurement, All Modification Items</i>	- / 41.588	- / 5.359	- / 3.761	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 50.708	
Installation													
<i>Modification Item 1 of 1:</i> GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL	- / 1.180	- / 0.556	- / 0.156	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.892	
<i>Subtotal: Installation</i>	- / 1.180	- / 0.556	- / 0.156	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.892	
Total													
Total Cost (Procurement + Support + Installation)	42.768	5.915	3.917	-	-	-	-	-	-	-	-	52.600	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0110 / LM-2500 Gas Turbine	Modification Number / Title: 1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL

Modification Item 1 of 1: GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL

Manufacturer Information

Manufacturer Name: General Electric	Manufacturer Location: Cincinnati, OH
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 10

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	May 2015	Feb 2016					
Delivery Dates	May 2016	Feb 2017					

Installation Information

Method of Implementation: GOVERNMENT:: Installation Name: GA015 DIGITAL FUEL CONTROL SHIPSET

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 1.180	1 / 0.556	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	36 / 1.736
FY 2015	- / -	- / -	3 / 0.156	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.156
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	35 / 1.180	1 / 0.556	3 / 0.156	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 1.892

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	1	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	35	-	-	1	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:
⁽⁵⁾ DFC ship-set procurement cost are updated based on actual prior year contract award prices. Due to DDG modernization program schedule changes, two (2) of the scheduled FY2016 ship sets will be installed using FY15 carryover funding of \$371K. FY17 planned installation of the FY16 procured units will be reflected in the Surface Power Equipment (BLI 0131) exhibit.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment

P-1 Line Item Number / Title:
0120 / Allison 501K Gas Turbine

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 **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	148.739	2.155	5.814	-	-	-	-	-	-	-	-	156.708
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	148.739	2.155	5.814	-	-	-	-	-	-	-	-	156.708
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	148.739	2.155	5.814	-	-	-	-	-	-	-	-	156.708

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Beginning in FY17 and out, The Department has consolidated all BLI 0120 Allison 501K Gas Turbine requirements and efforts into the Surface Power Equipment (BLI 0131).

The FY 2016 funding request was reduced by \$0.329 million to account for the availability of prior year execution balances.

This program provides the life-cycle support for the following Marine Gas Turbine systems: The Rolls Royce (Allison) 501-K Series Gas Turbines are used to drive electrical generators in Ship Service Gas Turbine Generators (SSGTG). The 501-K17 is used on the CG-47 Class ships. The 501-K34 is an upgraded version used on the DDG-51 Class ships and is not interchangeable with the 501-K17. The Rolls Royce MT-30 are used on LCS-1 variant for main propulsion and DDG 1000 for electrical generation. Rolls Royce 250-KS4 is used as a starter gas turbine for the 501-K34 on DDG 79 and follow.

[P40A / GF001 STOCK ROTATING SPARES]: GF001 - STOCK ROTATING SPARES

This cost code procures the MT-30 & MT-5 gas turbines for the Littoral Combat Ship (LCS) and Zumwalt DDG 1000 program, the 250-KS4 SSGTG starter engines for the DDG 79 and follow, and the 501-K34 gas turbines DDG 51 class ships. The procurement of these engines includes all required shipping/storage containers.

MT-30 Gas Turbines

Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 5 spares are required to support the fleet. Current MT-30 spares on-hand is two (2), three (3) budgeted procurement in FY18-FY20. The projected FY-20 and beyond in-service population of MT-30 gas turbine engines is fifty (50) due to new construction.

MT-5 Gas Turbines

Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 2 spares are required to support the fleet. Current MT-5 spares on-hand is zero (0) with one (1) budgeted procurement in FY18-FY20. The projected FY-20 and beyond in-service population of MT-5 gas turbine engines is six (6) due to new construction.

250-KS4 SSGTG Starter Engines

Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 12 spares are required to support the fleet requirements. Current spares on-hand is twelve (12) which achieves the baseline sparing requirement. The projected FY-18 in-service population of starter engines is 112 due to new construction. Operation Tomodachi has resulted in the radiological

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment		P-1 Line Item Number / Title: 0120 / Allison 501K Gas Turbine
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	Item MDAP/MAIS Code(s): N/A	
<p>contamination of twelve (12) 250-KS4 Marine Gas Turbines, which created an unplanned requirement to replace the twelve (12) affected engines beginning in FY13. Currently, the program has budgeted for six (6) replacements through FY20 leaving a requirement of six (6) additional replacement assets to be procured.</p> <p>501-K34 Gas Turbines Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 24 spares are required to support the fleet requirements. Current 501-K34 spares on-hand is 20 and 2 procured in FY-12, which leaves a requirement of 2 additional gas generator units to be procured. The projected FY-19 in-service population of gas turbine engines is 192, an increase from 186 in FY-12 due to new construction.</p> <p>[P40A / GF007 MODIFICATION PROGRAM]: GF007 - MODIFICATION PROGRAM This cost code procures modification kits listed below for the Rolls Royce Marine Gas Turbines (MGT). Analysis of Rolls Royce MGT engineering performance data, metrics, the SEA 21 Top Tech Issues and the component improvement program has identified necessary improvements to correct Rolls Royce MGT deficiencies. The modifications addresses the Fleet's top maintenance and reliability issues by reducing failure rates of system components, and improve Rolls Royce MGT readiness. The modification kits are packaged and shipped to the ship for installation during schedule CNO availability by a team of NSWCCD Philadelphia and Alteration Installation Team (AIT) personnel. Number of procurement quantities are a result of procuring various kits of various costs. The kits included in the cost code are as follows: --Engine Vibration Monitor --GTG Intake Filter System Replacement --SSGTG Bleed Air Control Valve Installation and Improvement --SSS Clutch upgrade to Air Turbine Starter (ATS) --SSGTG FADC 2-1 HMI Computer Conversion --SSGTG RIMSS Exhaust Backflow Detection System --Output Quill Shaft Bolt Replacement --RIMSS Tachometer Connector Improvement --Model 139 SSV and Off Mounted fuel Mod --FADC upgrade conversion --MT30 variant conversion kits</p> <p>[P40A / GF018 501 K-34 HOT SECTION REPLACEMENT]: GF018 - HOT SECTION REPLACEMENT This cost code procures High Pressure Turbine (HPT) components to supplement fall-out due to radiological contamination resultant from support of Operational Tomodachi. Number of procurement quantities are a result of procuring various kits of various costs. The kits included in the cost code are as follows: Blade Stage Kits T1, T2, T3 and T4; Vane Stage Kits T1, T2, T3 and T4</p> <p>[P40A / GF020 MANAGEMENT ENERGY INITIATIVES]: FY15 funds for energy initiatives realigned to Surface Combatant HM&E, Ships Support Equipment and Maritime Energy Initiatives (BLI 0200, L7027) to more effectively meet the Departments energy initiatives goals.</p> <p>[P40A / GF830 PRODUCTION ENGINEERING]: GF830 - PRODUCTION ENGINEERING The review and approval of any production contract technical documentation, or the separate development of this documentation to include Technical Manuals, Signal Flow Diagrams, PMS, Level III Production Drawings, Provisioning Technical Documentation (PTD), Program Support Data, Allowance Parts Lists (APL's) and engineering in support of final design reviews. This includes efforts associated with tracking and updating NDE, MGTIS and Weblog to reflect completed installations and ensure consistent documentation for engine configuration management.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment **P-1 Line Item Number / Title:** 0120 / Allison 501K Gas Turbine

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 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Allison 501K Gas Turbine	P-5a, P-21		- / 148.739	- / 2.155	- / 5.814	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 148.739	- / 2.155	- / 5.814	- / -	- / -	- / -

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

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

Justification:
Beginning in FY17 and out, The Department has consolidated all BLI 0120 Allison 501K Gas Turbine requirements and efforts into the Surface Power Equipment (BLI 0131).

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1 **P-1 Line Item Number / Title:** 0120 / Allison 501K Gas Turbine **Aggregated Items Title:** Allison 501K Gas Turbine

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) GF001 STOCK ROTATING SPARES ⁽¹⁾																				
1.1) 501-K34 ^{(2)(†)}	A		1,942K	11	21.362	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) 250-KS4 ^{(3)(†)}	A		405,600.00	5	2.028	448,000.00	1	0.448	454,000.00	1	0.454	-	-	-	-	-	-	-	-	-
1.3) MT-30 ^(†)	A		12,500K	1	12.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) GF001 STOCK ROTATING SPARES			-	-	35.890	-	-	0.448	-	-	0.454	-	-	-	-	-	-	-	-	-
2) GF007 MODIFICATION PROGRAM																				
2.1) PROCURE MODIFICATION KITS ⁽⁴⁾	A		-	-	89.870	-	-	1.166	-	-	3.063	-	-	-	-	-	-	-	-	-
2.2) INSTALLATION FOR MODIFICATION KITS	A		-	-	1.406	-	-	0.405	-	-	1.074	-	-	-	-	-	-	-	-	-
Subtotal: 2) GF007 MODIFICATION PROGRAM			-	-	91.276	-	-	1.571	-	-	4.137	-	-	-	-	-	-	-	-	-
3) GF018 501 K-34 HOT SECTION REPLACEMENT																				
3.1) 501K-34 HOT SECTION REPLACEMENT ⁽⁵⁾	A		299,489.80	49	14.675	-	-	-	-	-	1.013	-	-	-	-	-	-	-	-	-
Subtotal: 3) GF018 501 K-34 HOT SECTION REPLACEMENT			-	-	14.675	-	-	-	-	-	1.013	-	-	-	-	-	-	-	-	-
4) GF020 MANAGEMENT ENERGY INITIATIVES ⁽⁶⁾																				
4.1) 501K-17/34 3.5 COMPRESSOR UPGRADE	A		-	-	3.309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) ONLINE WATERWASH GTG ^(†)	A		122,000.00	2	0.244	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) GF020 MANAGEMENT ENERGY INITIATIVES			-	-	3.553	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5) GF830 PRODUCTION ENGINEERING																				
5.1) PRODUCTION ENGINEERING	A		-	-	3.345	-	-	0.136	-	-	0.210	-	-	-	-	-	-	-	-	-
Subtotal: 5) GF830 PRODUCTION ENGINEERING			-	-	3.345	-	-	0.136	-	-	0.210	-	-	-	-	-	-	-	-	-
Total			-	-	148.739	-	-	2.155	-	-	5.814	-	-	-	-	-	-	-	-	-

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

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0120 / Allison 501K Gas Turbine	Aggregated Items Title: Allison 501K Gas Turbine

Footnotes:

- (1) As a result of Operation Tomodachi the program currently has four (4) K34 engines that have been quarantined in either a Forward Repairable Inspection Activity (FRIA)-JAPAN or Aviation Radiological Inspection Facility (AVRIF) - San Diego and thus are no longer available to support the RFI sparing pool.
- (2) The cost estimates for the 501-K34 engine procurements between FY19-FY20 are based on the Rough Order of Magnitude pricing provided by Rolls Royce Naval Marine. The program will update the actual costs during the FY the contract is awarded.
- (3) The cost estimates is based on the Rough Order of Magnitude pricing provided by Rolls Royce Naval Marine" which varies between 4.2% to 5.0% across the FYDP. Although greater than OSD inflation rates, this escalation is consistent with the rates seen for other gas turbine OEMs.
- (4) "GF007 MODIFICATION PROGRAM: The modification program is designed to procure and install hardware to affect improvements in reliability and maintainability aboard CG-47 and DDG-51 class Ship Service Gas Turbine Generator (SSGTG) units. Each hull has a total of three (3) SSGTG units installed. Each SSGTG is controlled by a Full Authority Digital Control (FADC). CG-47 class uses the 501-K17 and DDG-51 class uses the 501-K34. There are currently three variants of the 501-K34 SSGTG: AG9130, AG9140HF and AG9140RF. The AG9140RF also includes the Remote Independent Mechanical Starting System (RIMSS) consisting of the 250-KS4 engine. The quantity of modification kits procured corresponds to the number of SSGTG units to be upgraded. The type and scope of each modification required will vary from one ship to the next. The number and type of kits installed in any given Fiscal Year (FY) varies depending upon ship availability schedules during that FY. FY2015 budget of \$1,571K funds Ship Change Document (SCD) 4483, Qty 18, \$421K - Bleed Air Control Valve Improvement for DDG-51; SCD 4638-9140HF, Qty 14, \$516K - SSS Clutch Upgrade for AG9140HF; SCD 4368-9140RF, Qty 2, \$68K - SSS Clutch Upgrade for AG9140RF; SCD 5216, Qty 12, \$100K - FADC 2-1 Conversion; SCD 7539, Qty 6, \$127K - RIMSS Backflow Detection System; SCD 8729, Qty 18, \$60K - Quill Shaft Bolt Improvement; SCD 10677, Qty 12, \$276K - Off Engine Fuel Valve Modification for CG-47. The remaining balance is for ancillary materials related to each of the aforementioned SCDs. FY2016 budget of \$4,137K funds SCD 1236, Qty 15, \$2,532K - SSGTG Intake Filter Upgrade for DDG-51; SCD 4483, Qty 18, \$428K - Bleed Air Control Valve Improvement for DDG-51; SCD 4638-9140HF, Qty 6, \$229K - SSS Clutch Upgrade for AG9140HF; SCD 4638-9140RF, Qty 15, \$634K - SSS Clutch Upgrade for AG9140RF; SCD 5216, Qty 12, \$102K - FADC 2-1 Conversion; SCD 12115, Qty 15, \$204K - RIMSS Tachometer Improvement. The remaining balance is for ancillary materials related to each of the aforementioned SCDs. The increase in the GF007 budget from FY15 to FY16 represents a change in the types and quantities of modification kits purchased from one year to the next; these changes are driven by ship availability schedule and include both procurement and installation costs."
- (5) FY16 Procurement will support up to seven (7) RADCON engine repairs.
- (6) FY15 funds for energy initiatives realigned to Surface Combatant HM&E, Ships Support Equipment and Maritime Energy Initiatives (BLI 0200, L7027) to more effectively meet the Departments energy initiatives goals.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0120 / Allison 501K Gas Turbine	Aggregated Items: Allison 501K Gas Turbine
---	---	--

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
1) GF001 STOCK ROTATING SPARES												
1.1) 501-K34 ⁽²⁾		2012	ROLLS ROYCE / WALPOLE, MA	SS / BOA	NAVSUP WSS, Mechanicsburg, PA	Jun 2012	Dec 2013	2	2,154K	Y		
1.2) 250-KS4 ⁽³⁾⁽⁺⁾		2011	ROLLS ROYCE / WALEPOLE, MA	SS / BOA	NAVSUP WSS, Mechanicsburg, PA	Jan 2012	Oct 2012	2	399,000.00	Y		
1.2) 250-KS4 ⁽³⁾⁽⁺⁾		2012	ROLLS ROYCE / WALEPOLE, MA	SS / BOA	NAVSUP WSS, Mechanicsburg, PA	Apr 2012	Feb 2013	1	399,000.00	Y		
1.2) 250-KS4 ⁽³⁾⁽⁺⁾		2013	ROLLS ROYCE / WALEPOLE, MA	SS / BOA	NAVSUP WSS, Mechanicsburg, PA	Mar 2013	Jan 2014	1	406,000.00	Y		
1.2) 250-KS4 ⁽³⁾⁽⁺⁾		2014	ROLLS ROYCE / WALEPOLE, MA	SS / FP	NAVSUP WSS, Mechanicsburg, PA	Mar 2014	Jan 2015	1	425,000.00	Y		
1.2) 250-KS4 ⁽³⁾		2015	ROLLS ROYCE / WALEPOLE, MA	SS / FP	NAVSUP	Mar 2015	Jan 2016	1	448,000.00	Y		
1.2) 250-KS4 ⁽³⁾		2016	ROLLS ROYCE / WALEPOLE, MA	SS / FP	NAVSUP	Mar 2016	Jan 2017	1	454,000.00	Y		
1.3) MT-30		2011	ROLLS ROYCE / WALPOLE, MA	SS / FFP	NAVSEA, Washington DC	Sep 2011	Mar 2013	1	12,500K	Y		
4) GF020 MANAGEMENT ENERGY INITIATIVES												
4.2) ONLINE WATERWASH GTG		2012	VARIOUS / VARIOUS	SS / FFP	NSWC, PHILA	May 2012	May 2012	2	50,000.00	Y		

⁽⁺⁾ indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1 **P-1 Line Item Number / Title:** 0120 / Allison 501K Gas Turbine **Aggregated Items:** Allison 501K Gas Turbine

Items <i>(Units in Each)</i>						Fiscal Year 2011													Fiscal Year 2012													B A L A N C E		
O C C O #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 0	BAL D U E A S O F 1 O C T	Calendar Year 2011													Calendar Year 2012														
							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) GF001 STOCK ROTATING SPARES																																		
1.2) 250-KS4 ⁽³⁾																																		
1		2011	NAVY	2	-	2																												
																					A -	-	-	-	-	-	-	-	-	-	-	-	2	
1		2012	NAVY	1	-	1																												
1		2013	NAVY	1	-	1																												
1		2014	NAVY	1	-	1																												
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1 **P-1 Line Item Number / Title:** 0120 / Allison 501K Gas Turbine **Aggregated Items:** Allison 501K Gas Turbine

Items <i>(Units in Each)</i>						Fiscal Year 2013												Fiscal Year 2014												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2012	BAL DUE AS OF 1 OCT	Calendar Year 2013												Calendar Year 2014												
							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) GF001 STOCK ROTATING SPARES																															
1.2) 250-KS4 ⁽³⁾																															
1		2011	NAVY	2	-	2	2																						-		
1		2012	NAVY	1	-	1	-	-	-	-	1																		-		
1		2013	NAVY	1	-	1						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1		2014	NAVY	1	-	1																						1			
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1 **P-1 Line Item Number / Title:** 0120 / Allison 501K Gas Turbine **Aggregated Items:** Allison 501K Gas Turbine

Items <i>(Units in Each)</i>						Fiscal Year 2015												Fiscal Year 2016												BALANCE	
O C C #	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
1) GF001 STOCK ROTATING SPARES																															
1.2) 250-KS4 ⁽³⁾																															
1		2011	NAVY	2	2	-																							-		
1		2012	NAVY	1	1	-																							-		
1		2013	NAVY	1	1	-																							-		
1		2014	NAVY	1	-	1	-	-	-	-	1																		-		
							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 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0120 / Allison 501K Gas Turbine	Aggregated Items: Allison 501K Gas Turbine
---	---	--

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	ROLLS ROYCE - WALEPOLE, MA	-	-	-	-	-	-	-	-	-	-	-	-

"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).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment

P-1 Line Item Number / Title:
0131 / Surface Power Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	15.514	-	15.514	42.862	44.507	42.227	42.434	69.631	257.175
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	15.514	-	15.514	42.862	44.507	42.227	42.434	69.631	257.175
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	15.514	-	15.514	42.862	44.507	42.227	42.434	69.631	257.175

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Program Increases in FY2017 accounts for the quantity change to five (5) Digital Fuel Control (DFC) kits due to DDG modernization program schedule changes.

Beginning in FY17 and out, the Department established budget line Surface Power Equipment BLI 0131, which is not a new start, but to consolidate the LM-2500 Gas Turbine BLI 0110 and Allison 501K Gas Turbine BLI 0120 along with their associated efforts into budget line.

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

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

The Rolls Royce (Allison) 501-K Series Gas Turbines are used to drive electrical generators in Ship Service Gas Turbine Generators (SSGTG). The 501-K17 is used on the CG-47 Class ships. The 501-K34 is an upgraded version used on the DDG-51 Class ships and is not interchangeable with the 501-K17. The MT5S is a higher-power derivative of the 501-K engine family (utilizing Rolls Royce's new "Marine Trent" or "MT" naming convention vice the older "501-K" naming convention) used for auxiliary electrical generation on DDG-1000 class ships; the MT5S is not interchangeable with the 501-K17 or 501-K34. The Rolls Royce MT-30 is used on LCS-1 (Lockheed) Class for main propulsion and DDG 1000 for electrical generation. Rolls Royce 250-KS4 is used as a starter gas turbine for the 501-K34 on DDG 79 and follow. The Rolls Royce MT7 gas turbine is used for both lift and propulsion fan power on the next generation of LCAC landing craft.

The budget funds the following:

[P40A / GA009 GE Readiness Improvement Upgrade Kits]: GA009 - MODIFICATION KIT PROGRAM: This cost code procures modification kits listed below for the GE Gas Turbine Engine. These modifications increase reliability and fleet readiness through component upgrades which improves the Mean Time Between Failure (MTBF). The modification kits are procured based on historical usage rates, re-packaged

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment		P-1 Line Item Number / Title: 0131 / Surface Power Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>into individual kits, and sent to either a depot to be installed during engine overhauls or to Regional Maintenance Centers for installation. No procurement quantities are a result of procuring various kits of various costs. The kits included in the cost code are as follows:</p> <ul style="list-style-type: none"> --Accelerometers (Vibration Monitor) -- Compressor Rear Frame Mid-flange Fastener installation -- C-Sump Lubrication Supply Line -- Power Turbine Upgraded Speed Sensor -- Improved Drain Shutoff Valve -- Turbine Mid-Frame Modification -- 7B Piping Modification -- 5-Element to 6-Element Pump Conversion -- T5.4 Flexible Thermo Harness -- Mid Flange Fastener <p>[P40A / GA010 Stock Rotating Spares]: GA010 - GAS GENERATOR: This cost element procures the LM2500 single shank propulsion gas turbine for the DDG-51 & LCS-2 class ships and the LM2500+ single shank propulsion gas turbine for the LHD8 and LHA6-LHA8. The programs projected FY-18 in-service population of single shank propulsion gas turbine engines is estimated to be 382 due to new construction. Breakdown of ship class spare procurement is listed below. The procurement of these engines includes all required shipping/storage containers. LM2500 gas generator procurements are presently scheduled to occur every other year.</p> <p>DDG LM2500 Single Shank Based on experience with 35 years of usage demand data on the LM2500 Engine and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 36 spares are required to support the fleet requirements. Current onhand is 28 with a requirement for eight (8) additional gas generator units to be procured IAW projected class population in FY21.</p> <p>LCS 2 LM2500 Single Shank. Based on experience with 35 years of usage demand data on the LM2500 Engine and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 3 spares are required to support the fleet requirements. Current onhand is 2 with the requirement for one (1) additional gas generator unit to be procured IAW projected class population in FY21.</p> <p>LHD8/LHA6-LHA8 LM2500+ Single Shank. Based on experience with 35 years of usage demand data on the LM2500 Engine and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 2 spares are required to support the fleet requirements. Current onhand is 1, which leaves the requirement for one (1) additional gas generator to be procured IAW projected class population. The program has budgeted to procure one (1) Power Turbine Assembly in FY18 to meet the baseline requirement. This engine represents a significantly different configuration than the standard LM2500 Single Shank Engine procured in previous fiscal years.</p> <p>LM2500 Hot Section Kits Are procured as required from the below list per quarterly failure analysis and maintained to replace High Pressure Turbine (HPT) components beyond economical repair (BER). Shortages of replacement blades increase engine repair turn-around time (RTAT) during engine refurbishment/repair as a result of material shortages.</p> <p>Procurement quantities are a result of procuring various kits of various costs. The kits included in the cost code are as follows:</p> <ul style="list-style-type: none"> --HPT Shrouds --HPT Seal Assembly --HPT Blades --HPT Nozzles --Compressor Blades 		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment		P-1 Line Item Number / Title: 0131 / Surface Power Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / GA014 Special Support Equipage]: GA014 Special Support Equipage Procurement of Special Support Equipment allows for increased depot repair capability, thereby stabilizing or reducing the cost to overhaul engines at the depot. This tooling is generally associated with depot modifications being made to the engine to increase engine reliability. This increased capability reduces engine overhaul costs.</p> <p>[P40A / GA015 LM2500 DIGITAL FUEL CONTROL]: GA015 - DIGITAL FUEL CONTROL (DFC) This cost code procures the Digital Fuel Control (DFC) shipsets, ancillary equipment and install material to support the CG/DDG modernization schedules. Procurement and installations are budgeted to correspond with CNO ship availabilities. One DFC Kit is required to upgrade each of the four LM2500 engines, which makes one DFC shipset.</p> <p>The DFC is the most significant change to the LM2500 engine since its inception into the USN that addresses obsolescence components which accounted for approximately 40% of all engine failures. This modification is estimated to be 75% more reliable than the old system.</p> <p>This upgrade replaces the existing Hydro-mechanical main fuel control (MFC) system which was designed for aircraft; with a Digital Fuel Control (DFC) system designed for military marine environment. This modification increases engine reliability, decreases periodic maintenance, enhances operational functions, and provides an automatic stall detection and shutdown capability.</p> <p>[P40A - 2 / GF001 STOCK ROTATING SPARES]: GF001 - STOCK ROTATING SPARES This cost code procures the MT-30 & MT-5 gas turbines for the Littoral Combat Ship (LCS) and Zumwalt DDG 1000 program, the 250-KS4 SSGTG starter engines for the DDG 79 and follow, and the 501-K34 gas turbines DDG 51 class ships. The procurement of these engines includes all required shipping/storage containers.</p> <p>MT-30 Gas Turbines Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 5 spares are required to support the fleet. Current MT-30 spares on-hand is two (2), four (4) budgeted procurement in FY18-FY21. The projected FY-21 and beyond in-service population of MT-30 gas turbine engines is fifty (50) due to new construction.</p> <p>MT-5 Gas Turbines Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 2 spares are required to support the fleet. Current MT-5 spares on-hand is zero (0) with two (2) budgeted in FY19-FY20. The projected FY-21 and beyond in-service population of MT-5 gas turbine engines is six (6) due to new construction.</p> <p>250-KS4 SSGTG Starter Engines Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 12 spares are required to support the fleet requirements. Current spares on-hand is twelve (12) which achieves the baseline sparing requirement. The projected FY-18 in-service population of starter engines is 112 due to new construction. Operation Tomodachi has resulted in the radiological contamination of twelve (12) 250-KS4 Marine Gas Turbines, which created an unplanned requirement to replace the twelve (12) affected engines beginning in FY13. Currently, the program has budgeted for seven (7) replacements through FY21 leaving a requirement of five (5) additional replacement assets to be procured.</p> <p>501-K34 Gas Turbines Based on experience with similar turbines and IAW 10 USC Sec. 2308, DFAR subpart 207.70 and DoDI 3110.06, a total of 24 spares are required to support the fleet requirements. Current 501-K34 spares on-hand is 22, which leaves a requirement of 2 additional gas generator units to be procured. The projected FY21 in-service population of gas turbine engines is 222 due to new construction.</p> <p>[P40A - 2 / GF007 MODIFICATION PROGRAM]: GF007 - MODIFICATION PROGRAM This cost code procures modification kits listed below for the Rolls Royce Marine Gas Turbines (MGT). Analysis of Rolls Royce MGT engineering performance data, metrics, the SEA 21 Top Tech Issues and the component improvement program has identified necessary improvements to correct Rolls Royce MGT deficiencies. The modifications addresses the Fleet's top maintenance and reliability issues by reducing failure rates of system components, and improve Rolls Royce MGT readiness. The modification kits are packaged and shipped to the ship for installation during schedule CNO availability by a team of NSWCCD Philadelphia and Alteration Installation Team (AIT) personnel. Number of procurement quantities are a result of procuring various kits of various costs. The kits included in the cost code are as follows: --Digital Voltage Regulator</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment		P-1 Line Item Number / Title: 0131 / Surface Power Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>--Engine Vibration Monitor --GTG Intake Filter System Replacement --SSGTG Bleed Air Control Valve Installation and Improvement --SSS Clutch upgrade to Air Turbine Starter (ATS) --SSGTG FADC 2-1 HMI Computer Conversion --SSGTG RIMSS Exhaust Backflow Detection System --Output Quill Shaft Bolt Replacement --RIMSS Tachometer Connector Improvement --Model 139 SSV and Off Mounted fuel Mod --FADC upgrade conversion --MT30 variant conversion kits</p> <p>[P40A - 3 / GA830 PRODUCTION ENGINEERING]: GA830 PRODUCTION ENGINEERING The review and approval of any production contract technical documentation, or the separate development of this documentation to include: - Technical Manuals - Signal Flow Diagrams - PMS - Level III Production Drawings - Provisioning Technical Documentation (PTD) - Program Support Data - Allowance Parts Lists (APL's) - Engineering in support of final design reviews This includes efforts associated with tracking and updating NDE, MGTIS and Weblog to reflect completed installations and ensure consistent documentation for engine configuration management.</p> <p>[P3A / GA015 DIGITAL FUEL CONTROL SHIPSET]: GA015 - DIGITAL FUEL CONTROL (DFC) This cost element procures the Digital Fuel Control (DFC) shipsets, ancillary equipment and install material to support the CG/DDG modernization schedules.</p> <p>FY17-FY21 quantity changed to five (5) per year due to DDG modernization program schedule change.</p> <p>One DFC Kit is required to upgrade each of the four DDG class LM2500 engines, which makes one DFC shipset.</p> <p>The DFC is the most significant change to the LM2500 engine since its inception into the USN that addresses obsolescence components which accounted for approximately 40% of all engine failures. In summary this modification is estimated to be 75% more reliable than the old system.</p> <p>This upgrade replaces the existing Hydro-mechanical main fuel control (MFC) system which was designed for aircraft; with a Digital Fuel Control (DFC) system designed for military marine environment. This modification increases engine reliability, decreases periodic maintenance, enhances operational functions, and provides an automatic stall detection and shutdown capability.</p> <p>GA6IN - INSTALLATION FOR DIGITAL FUEL CONTROL (DFC) GA015 FY17 planned installations reflects the FY16 procured units in LM2500 Gas Turbine (BLI 0110) exhibit.</p> <p>This cost element funds the installation of Cost element GA015-Digital Fuel Control (DFC) shipsets as part of the CG/DDG HM&E modernization program. This includes pre-assembly at NSWCCD Philadelphia, shipping to installation location, shipboard installation, training, post installation operational testing and associated travel cost.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment

P-1 Line Item Number / Title:
0131 / Surface Power Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	General Electric Gas Turbine			- / 0.000	- / -	- / -	- / 1.354	- / -	- / 1.354
P-40a	Rolls Royce Gas Turbine	P-5a		- / 0.000	- / -	- / -	- / 4.315	- / -	- / 4.315
P-40a	GA830 PRODUCTION ENGINEERING			- / 0.000	- / -	- / -	- / 0.346	- / -	- / 0.346
P-3a	1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL (TBD)			- / 0.000	- / -	- / -	- / 9.499	- / -	- / 9.499
P-40	Total Gross/Weapon System Cost			- / 0.000	- / -	- / -	- / 15.514	- / -	- / 15.514

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	General Electric Gas Turbine			- / -	- / -	- / -	- / -	- / -	- / -
P-40a	Rolls Royce Gas Turbine	P-5a		- / -	- / -	- / -	- / -	- / -	- / -
P-40a	GA830 PRODUCTION ENGINEERING			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL (TBD)			- / 9.901	- / 10.381	- / 10.888	- / 11.418	- / 14.192	- / 66.279
P-40	Total Gross/Weapon System Cost			- / 42.862	- / 44.507	- / 42.227	- / 42.434	- / 69.631	- / 257.175

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

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

Justification:
Beginning in FY17 and out, the Department established budget line Surface Power Equipment BLI 0131, which is not a new start, but to consolidate the LM-2500 Gas Turbine BLI 0110 and Allison 501K Gas Turbine BLI 0120 along with their associated efforts into budget line.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy															Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1										P-1 Line Item Number / Title: 0131 / Surface Power Equipment					Aggregated Items Title: General Electric Gas Turbine ⁽¹⁾					
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) GA009 GE Readiness Improvement Upgrade Kits																				
1.1) MODIFICATION KIT PROGRAM	A		-	-	-	-	-	-	-	-	-	-	-	0.490	-	-	-	-	-	0.490
Subtotal: 1) GA009 GE Readiness Improvement Upgrade Kits			-	-	0.000	-	-	-	-	-	-	-	-	0.490	-	-	-	-	-	0.490
3) GA014 Special Support Equipage ⁽²⁾																				
3.1) Special Support Equipage ⁽³⁾	A		-	-	-	-	-	-	-	-	-	-	-	0.800	-	-	-	-	-	0.800
Subtotal: 3) GA014 Special Support Equipage			-	-	0.000	-	-	-	-	-	-	-	-	0.800	-	-	-	-	-	0.800
4) GA015 LM2500 DIGITAL FUEL CONTROL																				
4.1) ANCILLARY EQUIPMENT/ INSTALLATION MATERIALS	A		-	-	-	-	-	-	-	-	-	-	-	0.064	-	-	-	-	-	0.064
Subtotal: 4) GA015 LM2500 DIGITAL FUEL CONTROL			-	-	0.000	-	-	-	-	-	-	-	-	0.064	-	-	-	-	-	0.064
Total			-	-	0.000	-	-	-	-	-	-	-	-	1.354	-	-	-	-	-	1.354

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

Footnotes:

- ⁽¹⁾ The FY 2016 funding request was reduced by \$3.208 million to account for the availability of prior year execution balances.
- ⁽²⁾ Procurement of Special Support Equipment allows for increased depot repair capability, thereby stabilizing or reducing the cost to overhaul engines at the depot. This tooling is generally associated with depot modifications being made to the engine to increase engine reliability. This increased capability reduces engine overhaul costs. FY17 - FY18 funding is being provided to procure support tooling for the LM2500+ Gas Turbine as part of Strategic Lay-Down 15 (SLD15), the propulsion engine for the LHA-6, which is being homeported in Sasebo, Japan. No installation cost is associated with this cost element.
- ⁽³⁾ FY17 - FY18 funding is being provided to procure support tooling for the LM2500+ Gas Turbine as part of Strategic Lay-Down 15 (SLD15), the propulsion engine for the LHA-6, which is being homeported in Sasebo, Japan. No installation cost is associated with this cost element.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1 **P-1 Line Item Number / Title:** 0131 / Surface Power Equipment **Aggregated Items Title:** Rolls Royce Gas Turbine

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) GF001 STOCK ROTATING SPARES																				
1.2) 250-KS4 ^(†)	A		-	-	-	-	-	-	-	-	474,000.00	1	0.474	-	-	-	474,000.00	1	0.474	
Subtotal: 1) GF001 STOCK ROTATING SPARES			-	-	0.000	-	-	-	-	-	-	-	0.474	-	-	-	-	-	0.474	
2) GF007 MODIFICATION PROGRAM																				
2.1) PROCURE MODIFICATION KITS (4)	A		-	-	-	-	-	-	-	-	-	-	2.810	-	-	-	-	-	2.810	
2.2) INSTALLATION FOR MODIFICATION KITS	A		-	-	-	-	-	-	-	-	-	-	1.031	-	-	-	-	-	1.031	
Subtotal: 2) GF007 MODIFICATION PROGRAM			-	-	0.000	-	-	-	-	-	-	-	3.841	-	-	-	-	-	3.841	
Total			-	-	0.000	-	-	-	-	-	-	-	4.315	-	-	-	-	-	4.315	

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

^(†) indicates the presence of a P-5a

Footnotes:

⁽⁴⁾ GF007 MODIFICATION PROGRAM: The modification program is designed to procure and install hardware to affect improvements in reliability and maintainability aboard CG-47 and DDG-51 class Ship Service Gas Turbine Generator (SSGTG) units. Each hull has a total of three (3) SSGTG units installed. Each SSGTG is controlled by a Full Authority Digital Control (FADC). CG-47 class uses the 501-K17 and DDG-51 class uses the 501-K34. There are currently three variants of the 501-K34 SSGTG: AG9130, AG9140HF and AG9140RF. The AG9140RF also includes the Remote Independent Mechanical Starting System (RIMSS) consisting of the 250-KS4 engine. The quantity of modification kits procured corresponds to the number of SSGTG units to be upgraded. The type and scope of each modification required will vary from one ship to the next. The type and scope of each modification required will vary from one ship to the next. The number and type of kits installed in any given Fiscal Year (FY) varies depending upon ship availability schedules during that FY. FY2017 budget of \$4,571K funds; Ship Change Document (SCD) ; FADC HMI Upgrade, Qty 21, \$1,415 - System upgrade; SCD 5216, Qty 24, \$173 - FADC 2-1 Conversion; SCD 10677, Qty 9, \$234 - Off-Eng Fuel Valve (CG47); SCD 12115, Qty 18, \$213 - RIMSS Tachometer; AYB 9130-021R1/9140-018R1, Qty 99, \$34 - HUM BRK; Digital Voltage Regulator (DVR) Upgrade, Qty 6, \$2,406. The remaining balance is for ancillary materials related to each of the aforementioned SCDs. The increase in the GF007 budget from FY16 to FY17 represents a change in the types and quantities of modification kits purchased from one year to the next; these changes are driven by ship availability schedule and include both procurement and installation costs.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0131 / Surface Power Equipment	Aggregated Items: Rolls Royce Gas Turbine
---	--	---

Item Number / Title [DODIC]	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) GF001 STOCK ROTATING SPARES												
1.2) 250-KS4		2017	ROLLS ROYCE / WALEPOLE, MA	SS / FFP	NAVSUP WSS, Mechanicsburg PA	Mar 2017	Sep 2018	1	474,000.00	Y		Dec 2016

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy															Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1							P-1 Line Item Number / Title: 0131 / Surface Power Equipment							Aggregated Items Title: GA830 PRODUCTION ENGINEERING (5)					

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total			
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
1) Production Engineering ⁽⁶⁾																					
1.1) Production Engineering	A		-	-	-	-	-	-	-	-	-	-	-	-	0.346	-	-	-	-	-	0.346
Subtotal: 1) Production Engineering			-	-	0.000	-	-	-	-	-	-	-	-	-	0.346	-	-	-	-	-	0.346
Total			-	-	0.000	-	-	-	-	-	-	-	-	-	0.346	-	-	-	-	-	0.346

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

Footnotes:
⁽⁵⁾ The review and approval of any production contract technical documentation, or the separate development of this documentation to include: - Technical Manuals - Signal Flow Diagrams - PMS - Level III Production Drawings - Provisioning Technical Documentation (PTD) - Program Support Data - Allowance Parts Lists (APL's) - Engineering in support of final design reviews This includes efforts associated with tracking and updating NDE, MGTIS and Weblog to reflect completed installations and ensure consistent documentation for engine configuration management.
⁽⁶⁾ GA830 is the sum of consolidation of cost code GA830 (Production Engineering) from budget line 0110 and cost code GF830 (Production Engineering) from budget line 0120, which is a result of the Department consolidation of budget lines 0110 and 0120.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1				P-1 Line Item Number / Title: 0131 / Surface Power Equipment				Modification Number / Title: 1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	9.499	-	9.499	9.901	10.381	10.888	11.418	14.192	66.279
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	9.499	-	9.499	9.901	10.381	10.888	11.418	14.192	66.279
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	9.499	-	9.499	9.901	10.381	10.888	11.418	14.192	66.279
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[GA015 DIGITAL FUEL CONTROL SHIPSET] This cost code procures the Digital Fuel Control (DFC) shipsets, ancillary equipment and install material to support the CG/DDG modernization schedules.

One DFC Kit is required to upgrade each of the four DDG class LM2500 engines, which makes one DFC shipset.

The DFC is the most significant change to the LM2500 engine since its inception into the USN that addresses obsolescence components which accounted for approximately 40% of all engine failures. In summary this modification is estimated to be 75% more reliable than old system.

This upgrade replaces the existing Hydro-mechanical main fuel control (MFC) system which was designed for aircraft;

with a Digital Fuel Control (DFC) system designed for military marine environment. This modification increases engine reliability, decreases periodic maintenance, enhances operational functions, and provides an automatic stall detection and shutdown capability.

FY17-FY21 quantity changed to five (5) per year due to DDG modernization program schedule change.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0131 / Surface Power Equipment	Modification Number / Title: 1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL												
B Kits												
Recurring												
1.1.1) GA015 DIGITAL FUEL CONTROL SHIPSET - NonOrganic ⁽⁷⁾	- / -	- / -	- / -	5 / 8.955	- / -	5 / 8.955	5 / 9.400	5 / 9.870	5 / 10.365	5 / 10.885	6 / 11.957	31 / 61.432
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 8.955	- / -	- / 8.955	- / 9.400	- / 9.870	- / 10.365	- / 10.885	- / 11.957	- / 61.432
<i>Subtotal: GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL</i>	- / -	- / -	- / -	5 / 8.955	- / -	5 / 8.955	5 / 9.400	5 / 9.870	5 / 10.365	5 / 10.885	6 / 11.957	31 / 61.432
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 8.955	- / -	- / 8.955	- / 9.400	- / 9.870	- / 10.365	- / 10.885	- / 11.957	- / 61.432
Installation												
<i>Modification Item 1 of 1:</i> GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL	- / 0.000	- / -	- / -	- / 0.544	- / -	- / 0.544	- / 0.501	- / 0.511	- / 0.523	- / 0.533	- / 2.235	- / 4.847
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 0.544	- / -	- / 0.544	- / 0.501	- / 0.511	- / 0.523	- / 0.533	- / 2.235	- / 4.847
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	-	9.499	-	9.499	9.901	10.381	10.888	11.418	14.192	66.279

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0131 / Surface Power Equipment	Modification Number / Title: 1 / GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL

Modification Item 1 of 1: GA015 - LM2500 GAS TURBINE DIGITAL FUEL CONTROL

Manufacturer Information

Manufacturer Name: General Electric	Manufacturer Location: Cincinnati, OH
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 10

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Feb 2017	Feb 2018	Feb 2019	Feb 2020	Feb 2021
Delivery Dates			Feb 2018	Feb 2019	Feb 2020	Feb 2021	Feb 2022

Installation Information

Method of Implementation: GOVERNMENT:: Installation Name: GA015 DIGITAL FUEL CONTROL SHIPSET

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	2 / 0.544	- / -	2 / 0.544	5 / 0.501	- / -	- / -	- / -	- / -	7 / 1.045
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.511	- / -	- / -	- / -	5 / 0.511
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.523	- / -	- / -	5 / 0.523
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.533	- / -	5 / 0.533
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.005	5 / 1.005
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.230	6 / 1.230
Total	- / -	- / -	- / -	2 / 0.544	- / -	2 / 0.544	5 / 0.501	5 / 0.511	5 / 0.523	5 / 0.533	11 / 2.235	33 / 4.847

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	2	2	1	2	-	2	1	-	3	1	1	2	1	1	11	33
Out	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	2	2	1	2	-	2	1	-	3	1	1	2	1	1	11	33

Footnotes:

(7) DFC ship-set procurement cost updated based on actual prior year contract award prices. FY17-FY21 quantity changed to five (5) per year due to DDG modernization program schedule change. FY17 planned installations reflects the FY16 procured units in LM2500 Gas Turbine (BLI 0110) exhibit.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment

P-1 Line Item Number / Title:
0140 / Hybrid Electric Drive (HED)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0708017N **Other Related Program Elements:** 0604567N, 0204228N

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	12.638	29.106	40.132	-	40.132	41.008	41.954	42.824	43.678	104.916	356.256
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	12.638	29.106	40.132	-	40.132	41.008	41.954	42.824	43.678	104.916	356.256
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	12.638	29.106	40.132	-	40.132	41.008	41.954	42.824	43.678	104.916	356.256

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	0.831	0.581	0.468	-	0.468	-	0.429	0.189	0.424	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Secretary of the Navy has made fuel conservation and reducing fuel consumption leading to energy independence a leading priority for the Navy. DDG 51 Class ships account for over 40% of Non-Nuclear Surface Navy fuel consumption. The large class numbers and remaining service life of the DDG 51 Class Ships, in comparison to other classes of ships, provide the best opportunity for long term payoff for the Navy in addressing the Secretary's priority.

The Hybrid Electric Drive (HED) consists of an electric motor which can be coupled to the propulsion reduction gear to provide propulsion power from the ship service gas turbine generators (SSGTGs) during low speed operations. This will permit the securing of one or more propulsion gas turbines and allow higher power loading resulting in more efficient operation of the SSGTGs, which will be generating electric power for the HED as well as ship service power. In addition to reducing fuel consumption and the associated costs, HED results in the additional benefits of increasing the ship's range, increased time on station performing its mission, and reducing the frequency of fuel replenishment.

The HED shipsets will include the propulsion motors, motor drives and the associated controls, interfaces, and mounting equipment that will be required to install the HED on DDG 51 Class Ships. This budget supports the HED for installation on DDG 51 Class in-service ships beginning in FY16.

[P3A / TD001 - Hybrid Electric Drive]: Procure Hybrid Electric Drive (HED) for the DDG 51 Flight IIA Ships including equipment procurement, recurring equipment engineering, equipment integration, and ILS

[P3A / Equipment Modification]: Equipment Modifications will be performed to correct deficiencies and engineering change proposals.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 1: Ship Propulsion Equipment **P-1 Line Item Number / Title:** 0140 / Hybrid Electric Drive (HED)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0708017N **Other Related Program Elements:** 0604567N, 0204228N

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / TD001 - Hybrid Electric Drive (TBD)			- / 0.000	- / 12.638	- / 29.106	- / 40.132	- / -	- / 40.132
P-40	Total Gross/Weapon System Cost			- / 0.000	- / 12.638	- / 29.106	- / 40.132	- / -	- / 40.132

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / TD001 - Hybrid Electric Drive (TBD)			- / 41.008	- / 41.954	- / 42.824	- / 43.678	- / 104.916	- / 356.256
P-40	Total Gross/Weapon System Cost			- / 41.008	- / 41.954	- / 42.824	- / 43.678	- / 104.916	- / 356.256

*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 item covers all HED procurement requirements for the DDG 51 Hybrid Electric Drive Backfit Program to be installed on Flight IIA ships. (DDG 79 through DDG 112; 34 ships).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0140 / Hybrid Electric Drive (HED)	Modification Number / Title: 1 / TD001 - Hybrid Electric Drive
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	12.638	29.106	40.132	-	40.132	41.008	41.954	42.824	43.678	104.916	356.256
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	12.638	29.106	40.132	-	40.132	41.008	41.954	42.824	43.678	104.916	356.256
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	12.638	29.106	40.132	-	40.132	41.008	41.954	42.824	43.678	104.916	356.256

(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 Hybrid Electric Drive (HED) consists of an electric motor which can be coupled to the propulsion reduction gear to provide propulsion power from the ship service gas turbine generators (SSGTGs) during low speed operations. This will permit the securing of one or more propulsion gas turbines and allow higher power loading resulting in more efficient operation of the SSGTGs, which will be generating electric power for the HED as well as ship service power.

Administrative lead time includes receipt of funds, document development, contracts review, and vendor concurrence. Production lead times are based on contractual requirements.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1					P-1 Line Item Number / Title: 0140 / Hybrid Electric Drive (HED)					Modification Number / Title: 1 / TD001 - Hybrid Electric Drive			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs: 0604567N					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> TD001 - Hybrid Electric Drive													
B Kits													
Recurring													
1.1.1) Hybrid Electric Drive (Units) - NonOrganic ⁽¹⁾	- / -	2 / 8.144	4 / 16.580	4 / 16.880	- / -	4 / 16.880	4 / 17.183	4 / 17.483	4 / 17.812	4 / 18.168	8 / 36.336	34 / 148.586	
<i>Subtotal: Recurring</i>	- / 0.000	- / 8.144	- / 16.580	- / 16.880	- / -	- / 16.880	- / 17.183	- / 17.483	- / 17.812	- / 18.168	- / 36.336	- / 148.586	
<i>Subtotal: TD001 - Hybrid Electric Drive</i>	- / -	2 / 8.144	4 / 16.580	4 / 16.880	- / -	4 / 16.880	4 / 17.183	4 / 17.483	4 / 17.812	4 / 18.168	8 / 36.336	34 / 148.586	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 8.144	- / 16.580	- / 16.880	- / -	- / 16.880	- / 17.183	- / 17.483	- / 17.812	- / 18.168	- / 36.336	- / 148.586	
Support (All Modification Items)													
2.1) Equipment Modification ⁽²⁾	- / -	- / -	- / -	- / 0.457	- / -	- / 0.457	- / 0.624	- / 0.758	- / 0.862	- / 0.879	- / 1.758	- / 5.338	
2.2) Engineering Services	- / -	- / 0.644	- / 1.238	- / 0.592	- / -	- / 0.592	- / 0.965	- / 1.459	- / 1.918	- / 1.956	- / 3.902	- / 12.674	
<i>Subtotal: Support</i>	- / 0.000	- / 0.644	- / 1.238	- / 1.049	- / -	- / 1.049	- / 1.589	- / 2.217	- / 2.780	- / 2.835	- / 5.660	- / 18.012	
Installation													
<i>Modification Item 1 of 1:</i> TD001 - Hybrid Electric Drive	- / 0.000	- / 3.850	- / 11.288	- / 22.203	- / -	- / 22.203	- / 22.236	- / 22.254	- / 22.232	- / 22.675	- / 62.920	- / 189.658	
<i>Subtotal: Installation</i>	- / 0.000	- / 3.850	- / 11.288	- / 22.203	- / -	- / 22.203	- / 22.236	- / 22.254	- / 22.232	- / 22.675	- / 62.920	- / 189.658	
Total													
Total Cost (Procurement + Support + Installation)	0.000	12.638	29.106	40.132	-	40.132	41.008	41.954	42.824	43.678	104.916	356.256	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0140 / Hybrid Electric Drive (HED)	Modification Number / Title: 1 / TD001 - Hybrid Electric Drive

Modification Item 1 of 1: TD001 - Hybrid Electric Drive

Manufacturer Information

Manufacturer Name: L3 Maritime Systems	Manufacturer Location: Various
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jun 2015	Feb 2016	Jan 2017	Jan 2018	Jan 2019	Jan 2020	Dec 2020
Delivery Dates	Jun 2016	Feb 2017	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Dec 2021

Installation Information

Method of Implementation: Industrial:: Installation Name: Hybrid Electric Drive (Units)

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / 12.408	2 / 8.480	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 10.888
FY 2016	- / -	- / 11.442	- / 2.216	4 / 16.794	- / -	4 / 16.794	- / -	- / -	- / -	- / -	- / -	4 / 20.452
FY 2017	- / -	- / -	- / 0.592	- / 3.967	- / -	- / 3.967	4 / 16.805	- / -	- / -	- / -	- / -	4 / 21.364
FY 2018	- / -	- / -	- / -	- / 1.442	- / -	- / 1.442	- / 3.983	4 / 16.812	- / -	- / -	- / -	4 / 22.237
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.448	- / 3.991	4 / 16.798	- / -	- / -	4 / 22.237
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.451	- / 3.985	4 / 17.132	- / -	4 / 22.568
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.449	- / 4.065	4 / 16.046	4 / 21.560
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.478	8 / 46.874	8 / 48.352
Total	- / -	- / 13.850	2 / 11.288	4 / 22.203	- / -	4 / 22.203	4 / 22.236	4 / 22.254	4 / 22.232	4 / 22.675	12 / 62.920	34 / 189.658

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	2	1	-	4	-	-	-	4	-	-	1	1	1	1	-	3	1	-	12	34
Out	-	-	-	-	-	-	-	-	-	-	-	2	1	-	2	1	1	-	1	4	-	-	1	1	1	-	1	1	1	16	34

Footnotes:

(1) HED will be installed on Flight IIA ships beginning in Q4 of FY16. Installation/DSA/AIT - Provides Planning Yard Design Services (DSA) (design, advance planning, and kitted material), Master Ship Repair (MSR) installations and Alteration Installation Team (AIT) Support. Design Services Allocation (DSA) - Planning Yard design and ship checks required for mandatory design tasks that must be completed within the year prior to the actual shipyard installations. These tasks occur over two years prior to the installation. Additionally, DSA requirements support design services during the year of installation for onsite design support. The NC-50 details the DSA requirements for the following ship installations: DDG 106, DDG 101 for FY 16 availabilities; DDG 87, DDG 94, DDG 103, DDG 111 for FY 17 availabilities; DDG 95, DDG 100, DDG 79, DDG 83 for FY 18 availabilities; DDG 84, DDG 85, DDG 104 DDG 105 for FY 19 availabilities; DDG 86, DDG 92, DDG 107 DDG 110 for FY 20 availabilities; DDG 81, DDG 88, DDG 89, DDG 90 for FY 21 availabilities.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 1	P-1 Line Item Number / Title: 0140 / Hybrid Electric Drive (HED)	Modification Number / Title: 1 / TD001 - Hybrid Electric Drive

⁽²⁾ Equipment Modifications will be performed to correct deficiencies and engineering change proposals.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 2: Generators	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E
--	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	16.129	26.664	36.860	29.974	-	29.974	36.489	36.209	37.575	38.336	137.380	395.616
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	16.129	26.664	36.860	29.974	-	29.974	36.489	36.209	37.575	38.336	137.380	395.616
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	16.129	26.664	36.860	29.974	-	29.974	36.489	36.209	37.575	38.336	137.380	395.616

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	0.140	0.188	0.157	-	0.157	-	0.160	0.199	-	-	0.844
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program initiated in FY14 as a transfer of funding from BLI 5246, to allow the Navy to better align and identify Hull, Mechanical & Electrical (HM&E) requirements, shipboard upgrades and equipment in support of the in-service Surface Combatants to include Class Common Equipment to support shorter Regular Overhauls and Selected Restricted Availabilities, including Ship System Components that require long repair turn-around; CG/DDG - Machinery Control Systems (MCS) COTS Refresh; Ship Control Systems and installation in support of the Ship Control System.

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

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

[P40A / GB003 - Ship Control Systems (Installed under GB6IN)]: Funds provided support the procurement of Ship Control Systems (SCS) upgrades to be installed under GB6IN on both cruisers and destroyers in support of the Fleet Modernization Program. Ship Control Systems provide lifecycle support for legacy and modernized engineering controls. SCS equipment and components are procured for various ship changes and engineering change proposals for in-service surface combatants and are installed outside of standard CNO availabilities. This effort includes maintaining Land Based Engineering Sites (LBES), CG / DDG system refresh, SCD design engineering, CG / DDG equipment procurement, and CG / DDG ISEA/ILS support. This cost code also provides for funding the necessary software licenses in support of the HM&E COTS systems/equipment for both CG and DDG class ships. Examples of systems requiring software licenses are: Machinery Control System components, Voyage Management System, Integrated Bridge System, Integrated Bridge and Navigation System, and Digital Video Surveillance System.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 2: Generators		P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / GB004 - Maritime Energy Initiatives (Procured in BLI 0110 and BLI 0120)]: Maritime Energy Initiatives provide surface combatants with technologies/tools that reduce energy usage. This will enhance operational capabilities, allowing for longer time on-station and fewer refuelings. These initiatives will also help meet the CNO's 2020 goal of reducing the surface fleet's fuel usage by 15%. The initiatives consist of: 1) Hull and Hydrodynamics - These initiatives focus on the dynamic forces where the ship contacts the water. They include, but are not limited to hull appendages that reduce drag, thus improving speed and fuel efficiency; 2) Power Generation and Transmission Systems - These initiatives focus on, but are not limited to improving the efficiency of ships' prime movers, generators, main reduction gears, propulsion motors/drives, and shaft-line components; 3) Combat and Ship Systems Support Services - These initiatives focus on, but are not limited to improving systems that use electricity when providing support services (e.g. cooling, heating, air, lube oil) to combat machinery, or life support systems; and 4) Decision Aids - These initiatives will inform the sailor of decisions they can make to save energy and improve operational efficiency by consolidating and manipulating ship data and providing it back as actionable information.</p> <p>[P40A / GB6IN - HM&E Installation (Procured under GB003)]: Funds provided support the installation of ship control systems upgrades (procured in GB003 CG/DDG) on both cruisers and destroyers in support of the Fleet Modernization Program. Installation funding supports expected service life and maintains the surface combatant's machinery and ship control systems. This functional code is also utilized to execute Maritime Energy Initiative installation tasks displayed on the P-3a exhibits.</p> <p>[P3A / GB004 - Maritime Energy Initiatives (TMCS)]: The Heating, Ventilation, and Air Conditioning (HVAC) system is the largest distributed system on a Surface Combatant and typically consumes between 25% and 40% of all energy used. Surveys on several DDG-class ships indicate that average space temperatures across the ship were being maintained well below the design temperature. Thermal Management Control System (TMCS) provides centralized control and monitoring of space temperatures at design set-points for each compartment throughout the ship. This technology enables improved operational efficiency of the HVAC system, thereby lowering AC loads and reducing electrical demand.</p> <p>[P3A - 2 / GB004 - Maritime Energy Initiatives (Bow Bulb)]: Bow bulb is a near surface, small volume design for installation on the destroyer's bow in combination with the existing sonar dome. Modification of bow shape reduces hull wave drag without an increase in hull resistance, reducing fuel consumption.</p> <p>[P3A - 3 / GB004 - Maritime Energy Initiatives (VSD for CPS)]: The Collective Protective System (CPS) is a full time air filtration system integrated into the ship's HVAC system. The amount of outside supply air delivered to CPS zones varies with filter loading over time and is almost always higher than needed, resulting in above average HVAC loads. Variable Speed Drive (VSD) will be installed as an airflow control component to optimize supply air flow, realizing energy savings from fan motor and reduced HVAC loads.</p> <p>[P3A - 4 / GB004 - Maritime Energy Initiatives (SSL)]: Solid State Lighting (SSL) lamps consist of individual Light Emitting Diodes (LEDs), which serve as replacements for incandescent and fluorescent lighting fixtures. SSL replacements are engineered to meet military specifications. SSL replacements for incandescent and fluorescent fixtures reduce energy usage by approximately 85% and 50%, respectively. Additionally, this install will drastically reduce the electrical lighting load, maintenance actions, and the space needed for spare parts.</p> <p>[P3A - 5 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA)]: The Shipboard Energy Dashboard FLT IIA technology is a shipboard tool providing real time situational awareness of the energy demand associated with equipment lineup and mission. Technology raises operator awareness of how certain engineering plant lineups and equipment affect fuel consumption rates. Energy savings will be realized through energy usage culture change.</p> <p>[P3A - 6 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I)]: The Shipboard Energy Dashboard FLT I technology is a shipboard tool providing real time situational awareness of the energy demand associated with equipment lineup and mission. Technology raises operator awareness of how certain engineering plant lineups and equipment affect fuel consumption rates. Energy savings will be realized through energy usage culture change.</p> <p>[P3A - 7 / GB004 - Maritime Energy Initiatives (Triton Fuel Penalty)]: Triton Fuel Penalty is a system capable of reporting in real time when a ship's powering condition has degraded due to increased drag from bio fouling. Personnel will be able to schedule ship cleanings utilizing feedback taken from actual measurements of drag while in service. This capability will reduce the current penalty paid by the fleet to overcome the negative effects of biological fouling on ship performance and fuel expenditure.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 2: Generators

P-1 Line Item Number / Title:
0200 / Surface Combatant HM&E

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Surface Combatant HM&E	P-5a		- / 16.129	- / 14.193	- / 16.010	- / 13.808	- / -	- / 13.808
P-3a	1 / GB004 - Maritime Energy Initiatives (TMCS) (TBD)			- / 0.000	- / 4.946	- / 11.656	- / 9.136	- / -	- / 9.136
P-3a	2 / GB004 - Maritime Energy Initiatives (Bow Bulb) (TBD)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-3a	3 / GB004 - Maritime Energy Initiatives (VSD for CPS) (TBD)			- / 0.000	- / 2.017	- / 4.417	- / 3.613	- / -	- / 3.613
P-3a	4 / GB004 - Maritime Energy Initiatives (SSL) (TBD)			- / 0.000	- / 5.262	- / 4.165	- / 3.119	- / -	- / 3.119
P-3a	5 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA) (TBD)			- / 0.000	- / 0.246	- / 0.612	- / 0.298	- / -	- / 0.298
P-3a	6 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I) (TBD)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-3a	7 / GB004 - Maritime Energy Initiatives (Triton Fuel Penalty) (TBD)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 16.129	- / 26.664	- / 36.860	- / 29.974	- / -	- / 29.974

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Surface Combatant HM&E	P-5a		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / GB004 - Maritime Energy Initiatives (TMCS) (TBD)			- / 8.222	- / 9.473	- / 8.521	- / 9.818	- / 23.528	- / 85.300
P-3a	2 / GB004 - Maritime Energy Initiatives (Bow Bulb) (TBD)			- / 1.544	- / 1.734	- / 2.996	- / 4.849	- / 42.462	- / 53.585
P-3a	3 / GB004 - Maritime Energy Initiatives (VSD for CPS) (TBD)			- / 4.344	- / 6.392	- / 6.412	- / 6.624	- / 48.111	- / 81.930
P-3a	4 / GB004 - Maritime Energy Initiatives (SSL) (TBD)			- / 5.543	- / 2.700	- / 4.075	- / 1.117	- / 2.210	- / 28.191
P-3a	5 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA) (TBD)			- / 0.217	- / -	- / -	- / -	- / -	- / 1.373
P-3a	6 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I) (TBD)			- / -	- / -	- / 0.877	- / 0.873	- / 11.233	- / 12.983
P-3a	7 / GB004 - Maritime Energy Initiatives (Triton Fuel Penalty) (TBD)			- / -	- / 0.351	- / 0.884	- / 0.912	- / 9.836	- / 11.983
P-40	Total Gross/Weapon System Cost			- / 36.489	- / 36.209	- / 37.575	- / 38.336	- / 137.380	- / 395.616

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy															Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2										P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E					Aggregated Items Title: Surface Combatant HM&E				

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) GB001 - CG/DDG COTS Tech Refresh																				
1.1) GB001 - CG/DDG COTS Tech Refresh	A		-	-	6.058	-	-	5.231	-	-	6.457	-	-	3.782	-	-	-	-	-	3.782
Subtotal: 1) GB001 - CG/DDG COTS Tech Refresh			-	-	6.058	-	-	5.231	-	-	6.457	-	-	3.782	-	-	-	-	-	3.782
2) GB002 - Class Common Equipment																				
2.1) GB002 - Class Common Equipment	A		-	-	1.995	-	-	1.900	-	-	2.020	-	-	2.382	-	-	-	-	-	2.382
Subtotal: 2) GB002 - Class Common Equipment			-	-	1.995	-	-	1.900	-	-	2.020	-	-	2.382	-	-	-	-	-	2.382
3) GB003 - Ship Control Systems (Installed under GB6IN) ⁽¹⁾																				
3.1) GB003 - CG 47 Class (Installed under GB6IN 5.1) ^{(2)(t)}	A		1,232K	1	1.232	-	-	-	1,373K	1	1.373	5,230K	1	5.230	-	-	-	5,230K	1	5.230
3.2) GB003 - DDG 51 Class (Installed under GB6IN 5.2) ^{(3)(t)}	A		3,695K	1	3.695	4,368K	1	4.368	4,273K	1	4.273	-	-	-	-	-	-	-	-	-
3.3) GB003 - Ship Control Systems Software Licenses	A		-	-	3.149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) GB003 - Ship Control Systems (Installed under GB6IN)			-	-	8.076	-	-	4.368	-	-	5.646	-	-	5.230	-	-	-	-	-	5.230
4) GB004 - Maritime Energy Initiatives (Procured in BLI 0110 and BLI 0120) ⁽⁴⁾																				
4.1) GB004 - Maritime Energy Initiative Install (Procured prior to transfer) ⁽⁵⁾	A		-	-	-	-	-	2.694	-	-	0.084	-	-	-	-	-	-	-	-	-
Subtotal: 4) GB004 - Maritime Energy Initiatives (Procured in BLI 0110 and BLI 0120)			-	-	0.000	-	-	2.694	-	-	0.084	-	-	-	-	-	-	-	-	-
5) GB6IN - HM&E Installation (Procured under GB003)																				
5.1) GB6IN - CG 47 Class Install (Procured under GB003 3.1) ⁽⁶⁾	A		-	-	-	-	-	-	-	-	-	-	-	1.681	-	-	-	-	-	1.681
5.2) GB6IN - DDG 51 Class Install (Procured under GB003 3.2) ⁽⁷⁾	A		-	-	-	-	-	-	-	-	1.803	-	-	0.733	-	-	-	-	-	0.733
Subtotal: 5) GB6IN - HM&E Installation (Procured under GB003)			-	-	0.000	-	-	-	-	-	1.803	-	-	2.414	-	-	-	-	-	2.414
Total			-	-	16.129	-	-	14.193	-	-	16.010	-	-	13.808	-	-	-	-	-	13.808

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

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Aggregated Items Title: Surface Combatant HM&E

(†) indicates the presence of a P-5a

Footnotes:

- (1) Procurements in cost code GB003 are dependent upon the specific alterations to be accomplished and an individual ship's configuration. Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Quantity of "1" represents the total value of multiple shipsets purchased on multiple contracts for multiple ships. Unit costs for specific alterations are not associated with cost code GB003 due to the varying degree of engineering changes required per ship (ship configuration dependent) and the installation normally occurs outside of CNO availabilities, in either a WOO or CMAV.
- (2) GB003 Scheduled Procurements for CG 47 Class (To be installed under GB6IN 5.1): FY15: No procurements; FY16: 9 different kits procured for 3 ships (CG 53, CG 56, and CG 62) to be installed in FY17 under GB6IN; FY17: 20 different kits procured for 3 ships (CG 58, CG59, and CG 61) to be installed in FY18 under GB6IN; FY18: 1 kit procured for 1 ship (CG 60) to be installed in FY19 under GB6IN; FY19: No procurements; FY20: 1 kit procured for 1 ship to be installed in FY21 under GB6IN.
- (3) GB003 Scheduled Procurements for DDG 51 Class (To be installed under GB6IN 5.2): FY15: 5 kits procured for 5 ships (DDG 52, DDG 53, DDG 59, DDG 61, and DDG 65) to be installed in FY16 under GB6IN; FY16: 20 different kits procured for 4 ships (DDG 52, DDG 55, DDG 69, and DDG 111) to be installed in FY17 under GB6IN; FY17: No procurements; FY18: 20 different kits procured for 8 ships to be installed in FY19 under GB6IN (DDG 51, DDG 53, DDG 56, DDG 58, DDG 59, DDG 68, DDG 113, and DDG 115; FY19: 22 different kits procured for 9 ships to be installed in FY20 under GB6IN; FY20: 14 different kits procured for 8 ships to be installed in FY21 under GB6IN;
- (4) Maritime Energy Initiative funding transferred from BLI 0110 and BLI 0120 to BLI 0200 in FY15. FY15/FY16 installations tied to prior year procurements under different BLI's cannot be properly displayed in BLI 0200 P-3a exhibits. The purpose of this P-40a is to display this installation data. All installations tied to BLI 0200 Maritime Energy Initiative procurements are displayed on P-3a exhibits.
- (5) FY15 Installs: FY15 installs correspond to FY14 procurements made under BLI 0110 and BLI 0120 prior to transfer to BLI 0200. \$2.209M installs 2 procurements for Thermal Management Control System and \$0.485M installs 6 procurements for Shipboard Energy Dashboard FLT IIA. FY16 Installs: \$0.084M installs 1 additional FY14 procurement for Shipboard Energy Dashboard FLT IIA.
- (6) GB6IN Scheduled Installs for CG 47 Class (Procured under GB003 3.1): FY15: No installations; FY16: No installations; FY17: 9 different kits installed on 3 ships (CG 53, CG 56, and CG 62) procured in FY16 under GB003 (Units were procured in prior years when installation funding was not available); FY18: 20 different kits installed on 3 ships (CG 58, CG 59, and CG 61) procured in FY17 under GB003 (Units were procured in prior years when installation funding was not available; FY19: 1 kit installed on 1 ship procured in FY18 under GB003; FY20: No installations; FY21: 2 different kits installed on 1 ship procured in FY20 under GB003;
- (7) GB6IN Scheduled Installs for DDG 51 Class (Procured under GB003 3.2): FY15: No installations; FY16: 5 kits installed on 5 ships (DDG 52, DDG 53, DDG 59, DDG 61, and DDG 65) procured in FY15 under GB003; FY17: 20 different kits installed on 4 ships (DDG 52, DDG 55, DDG 69, and DDG 111) procured in FY16 under GB003; FY18: No installations; FY19: 20 different kits installed on 8 ships (DDG 51, DDG 53, DDG 56, DDG 58, DDG 59, DDG 68, DDG 113, DDG 115) procured in FY18 under GB003; FY20: 22 different kits installed on 9 ships procured in FY19 under GB003; FY21: 14 different kits installed on 8 ships procured in FY20 under GB003.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Aggregated Items: Surface Combatant HM&E
---	---	--

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) GB003 - Ship Control Systems (Installed under GB6IN)												
3.1) GB003 - CG 47 Class (Installed under GB6IN 5.1) ⁽²⁾		2014 ⁽⁸⁾	Various / Various	Various	NAVSSSES	Apr 2014	Apr 2015	1	1,232K	Y		
3.1) GB003 - CG 47 Class (Installed under GB6IN 5.1) ⁽²⁾		2016 ⁽⁹⁾	Various / Various	Various	NAVSSSES	Dec 2015	Dec 2016	1	1,373K	Y		
3.1) GB003 - CG 47 Class (Installed under GB6IN 5.1) ⁽²⁾		2017	Various / Various	C / TBD	** NO PCO **	Dec 2016	Dec 2017	1	5,230K	N		
3.2) GB003 - DDG 51 Class (Installed under GB6IN 5.2) ⁽³⁾		2014 ⁽¹⁰⁾	Various / Various	Various	NAVSESS	Apr 2014	Apr 2015	1	3,695K	Y		
3.2) GB003 - DDG 51 Class (Installed under GB6IN 5.2) ⁽³⁾		2015 ⁽¹¹⁾	Various / Various	Various	NAVSSSES	Dec 2014	Dec 2015	1	4,368K	Y		
3.2) GB003 - DDG 51 Class (Installed under GB6IN 5.2) ⁽³⁾		2016 ⁽¹²⁾	Various / Various	Various	NAVSSSES	Dec 2015	Dec 2016	1	4,273K	Y		

Footnotes:

- ⁽⁸⁾ The unit cost accounts for 11 different kits procured for 1 ship (CG 64) over multiple contracts. FY14 procurements are dependent upon the specific alterations required for each ship. Ship set costs and quantities vary based on the individual ship's configuration.
- ⁽⁹⁾ The unit cost accounts for 9 different kits procured for 3 ships (CG 53, CG 56, and CG 62) over multiple contracts. FY16 procurements are dependent upon the specific alterations required for each ship. Ship set costs and quantities vary based on the individual ship's configuration.
- ⁽¹⁰⁾ The unit cost accounts for 4 kits procured for 4 ships (DDG 51, DDG 57, DDG 58, and DDG 69) over multiple contracts. FY14 procurements are dependent upon the specific alterations required for each ship. Ship set costs and quantities vary based on the individual ship's configuration.
- ⁽¹¹⁾ The unit cost accounts for 5 kits procured for 5 ships (DDG 52, DDG 53, DDG 59, DDG 61, and DDG 65) over multiple contracts. FY15 procurements are dependent upon the specific alterations required for each ship. Ship set costs and quantities vary based on the individual ship's configuration.
- ⁽¹²⁾ The unit cost accounts for 20 different kits procured for 3 ships (DDG 52, DDG 55, DDG 69, and DDG 111) over multiple contracts. FY16 procurements are dependent upon the specific alterations required for each ship. Ship set costs and quantities vary based on the individual ship's configuration.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2				P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E				Modification Number / Title: 1 / GB004 - Maritime Energy Initiatives (TMCS)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	4.946	11.656	9.136	-	9.136	8.222	9.473	8.521	9.818	23.528	85.300
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	4.946	11.656	9.136	-	9.136	8.222	9.473	8.521	9.818	23.528	85.300
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	4.946	11.656	9.136	-	9.136	8.222	9.473	8.521	9.818	23.528	85.300
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

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

Engineering Services:

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

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2					P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E					Modification Number / Title: 1 / GB004 - Maritime Energy Initiatives (TMCS)			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (TMCS)</i>													
B Kits													
Recurring													
1.1.1) Thermal Management Control System Equipment - NonOrganic ⁽¹³⁾	- / -	4 / 3.964	4 / 4.032	2 / 1.812	- / -	2 / 1.812	4 / 3.688	2 / 1.877	4 / 3.822	2 / 1.946	6 / 6.498	28 / 27.639	
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / 3.964</i>	<i>- / 4.032</i>	<i>- / 1.812</i>	<i>- / -</i>	<i>- / 1.812</i>	<i>- / 3.688</i>	<i>- / 1.877</i>	<i>- / 3.822</i>	<i>- / 1.946</i>	<i>- / 6.498</i>	<i>- / 27.639</i>	
<i>Subtotal: GB004 - Maritime Energy Initiatives (TMCS)</i>	<i>- / -</i>	<i>4 / 3.964</i>	<i>4 / 4.032</i>	<i>2 / 1.812</i>	<i>- / -</i>	<i>2 / 1.812</i>	<i>4 / 3.688</i>	<i>2 / 1.877</i>	<i>4 / 3.822</i>	<i>2 / 1.946</i>	<i>6 / 6.498</i>	<i>28 / 27.639</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 0.000</i>	<i>- / 3.964</i>	<i>- / 4.032</i>	<i>- / 1.812</i>	<i>- / -</i>	<i>- / 1.812</i>	<i>- / 3.688</i>	<i>- / 1.877</i>	<i>- / 3.822</i>	<i>- / 1.946</i>	<i>- / 6.498</i>	<i>- / 27.639</i>	
Support (All Modification Items)													
2.1) TMCS Engineering Services	- / -	- / 0.082	- / 0.202	- / 0.104	- / -	- / 0.104	- / 0.113	- / 0.115	- / 0.117	- / 0.119	- / 0.970	- / 1.822	
<i>Subtotal: Support</i>	<i>- / 0.000</i>	<i>- / 0.082</i>	<i>- / 0.202</i>	<i>- / 0.104</i>	<i>- / -</i>	<i>- / 0.104</i>	<i>- / 0.113</i>	<i>- / 0.115</i>	<i>- / 0.117</i>	<i>- / 0.119</i>	<i>- / 0.970</i>	<i>- / 1.822</i>	
Installation													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (TMCS)</i>	<i>- / 0.000</i>	<i>- / 0.900</i>	<i>- / 7.422</i>	<i>- / 7.220</i>	<i>- / -</i>	<i>- / 7.220</i>	<i>- / 4.421</i>	<i>- / 7.481</i>	<i>- / 4.582</i>	<i>- / 7.753</i>	<i>- / 16.060</i>	<i>- / 55.839</i>	
<i>Subtotal: Installation</i>	<i>- / 0.000</i>	<i>- / 0.900</i>	<i>- / 7.422</i>	<i>- / 7.220</i>	<i>- / -</i>	<i>- / 7.220</i>	<i>- / 4.421</i>	<i>- / 7.481</i>	<i>- / 4.582</i>	<i>- / 7.753</i>	<i>- / 16.060</i>	<i>- / 55.839</i>	
Total													
Total Cost (Procurement + Support + Installation)	0.000	4.946	11.656	9.136	-	9.136	8.222	9.473	8.521	9.818	23.528	85.300	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Modification Number / Title: 1 / GB004 - Maritime Energy Initiatives (TMCS)

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

Manufacturer Information

Manufacturer Name: NAG Marine	Manufacturer Location: Norfolk, VA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Dec 2014	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	
Delivery Dates	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	

Installation Information

Method of Implementation: AIT INSTALLATION FOR TMCS:: Installation Name: Thermal Management Control System Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / 0.900	4 / 6.506	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 7.406
FY 2016	- / -	- / -	- / 0.916	4 / 6.731	- / -	4 / 6.731	- / -	- / -	- / -	- / -	- / -	4 / 7.647
FY 2017	- / -	- / -	- / -	- / 0.489	- / -	- / 0.489	2 / 3.426	- / -	- / -	- / -	- / -	2 / 3.915
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.995	4 / 6.975	- / -	- / -	- / -	4 / 7.970
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.506	2 / 3.550	- / -	- / -	2 / 4.056
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.032	4 / 7.228	- / -	4 / 8.260
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.525	2 / 3.679	2 / 4.204
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 12.381	6 / 12.381
Total	- / -	- / 0.900	4 / 7.422	4 / 7.220	- / -	4 / 7.220	2 / 4.421	4 / 7.481	2 / 4.582	4 / 7.753	8 / 16.060	28 / 55.839

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	2	-	2	-	2	2	-	-	2	-	-	-	4	-	-	-	2	-	-	-	4	-	-	8	28
Out	-	-	-	-	-	-	-	-	2	-	2	2	2	-	-	-	2	-	-	-	4	-	-	-	2	-	-	-	4	8	28

Footnotes:

(13) Installation costs include planning support that is conducted the year prior to installation (i.e., \$0.900M installation cost in FY15 refers to the prior year planning for FY16 installation). \$2.209M for 2 TMCS installations in FY15 is captured in the P-40a Exhibit (GB004 4.1). This is due to the fact that installations tied to prior year procurements made under different BLIs cannot be properly captured on the BLI 0200 P-3a Exhibit. To capture the total FY15 installation requirement for TMCS you would combine the \$0.900M in planning support (shown on the P-3a Exhibit) with the \$2.209M for TMCS installations (shown on the P-40a Exhibit) for a total installation cost of \$3.109M. Installation schedules vary due to ships entering different types of availabilities for different lengths of time. FY18 unit costs increase slightly above the standard rate of inflation due to efforts associated with ships Information Assurance/Cyber Security measures.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2				P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E				Modification Number / Title: 2 / GB004 - Maritime Energy Initiatives (Bow Bulb)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	1.544	1.734	2.996	4.849	42.462	53.585
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	1.544	1.734	2.996	4.849	42.462	53.585
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	1.544	1.734	2.996	4.849	42.462	53.585

(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:

Bow bulb is a near surface, small volume design for installation on the destroyer's bow in combination with the existing sonar dome. Modification of bow shape reduces hull wave drag without an increase in hull resistance, reducing fuel consumption.

Engineering Services:

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

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2					P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E					Modification Number / Title: 2 / GB004 - Maritime Energy Initiatives (Bow Bulb)			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (Bow Bulb)</i>													
B Kits													
Recurring													
1.1.1) Bow Bulb Equipment - NonOrganic ⁽¹⁴⁾	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.205	- / -	2 / 2.498	1 / 1.271	26 / 15.599	30 / 20.573	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 1.205	- / -	- / 2.498	- / 1.271	- / 15.599	- / 20.573	
<i>Subtotal: GB004 - Maritime Energy Initiatives (Bow Bulb)</i>	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.205	- / -	2 / 2.498	1 / 1.271	26 / 15.599	30 / 20.573	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 1.205	- / -	- / 2.498	- / 1.271	- / 15.599	- / 20.573	
Support (All Modification Items)													
2.1) Bow Bulb Engineering Services	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.080	- / 0.120	- / 0.122	- / 0.124	- / 0.432	- / 0.878	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.080	- / 0.120	- / 0.122	- / 0.124	- / 0.432	- / 0.878	
Installation													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (Bow Bulb)</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.259	- / 1.614	- / 0.376	- / 3.454	- / 26.431	- / 32.134	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.259	- / 1.614	- / 0.376	- / 3.454	- / 26.431	- / 32.134	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	1.544	1.734	2.996	4.849	42.462	53.585	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Modification Number / Title: 2 / GB004 - Maritime Energy Initiatives (Bow Bulb)

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

Manufacturer Information

Manufacturer Name: Bath Iron Works (BIW)				Manufacturer Location: Bath, ME			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 12			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates				Dec 2017	Dec 2018	Dec 2019	
Delivery Dates				Dec 2018	Dec 2019	Dec 2020	

Installation Information

Method of Implementation: Shipyard:: Installation Name: Bow Bulb Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.259	1 / 1.614	- / -	- / -	- / -	1 / 1.873
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.376	2 / 3.345	- / -	2 / 3.721
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.109	1 / 1.703	1 / 1.812
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 24.728	26 / 24.728
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.259	1 / 1.614	- / 0.376	2 / 3.454	27 / 26.431	30 / 32.134

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	-	27	30
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	27	30

Footnotes:

⁽¹⁴⁾ FY18 DSA increase due to additional procurement/fabrication of mock cradle used for holding Bow Bulb in place to weld to ships hull.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2				P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E				Modification Number / Title: 3 / GB004 - Maritime Energy Initiatives (VSD for CPS)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	2.017	4.417	3.613	-	3.613	4.344	6.392	6.412	6.624	48.111	81.930
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	2.017	4.417	3.613	-	3.613	4.344	6.392	6.412	6.624	48.111	81.930
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	2.017	4.417	3.613	-	3.613	4.344	6.392	6.412	6.624	48.111	81.930
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

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

Engineering Services:

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

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2					P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E					Modification Number / Title: 3 / GB004 - Maritime Energy Initiatives (VSD for CPS)			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> GB004 - Maritime Energy Initiatives (VSD for CPS)													
B Kits													
Recurring													
1.1.1) Variable Speed Drive Equipment - NonOrganic (15)	- / -	2 / 1.599	3 / 2.166	1 / 0.743	- / -	1 / 0.743	4 / 3.026	3 / 2.310	4 / 3.136	3 / 2.394	24 / 18.618	44 / 33.992	
<i>Subtotal: Recurring</i>	- / 0.000	- / 1.599	- / 2.166	- / 0.743	- / -	- / 0.743	- / 3.026	- / 2.310	- / 3.136	- / 2.394	- / 18.618	- / 33.992	
<i>Subtotal: GB004 - Maritime Energy Initiatives (VSD for CPS)</i>	- / -	2 / 1.599	3 / 2.166	1 / 0.743	- / -	1 / 0.743	4 / 3.026	3 / 2.310	4 / 3.136	3 / 2.394	24 / 18.618	44 / 33.992	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 1.599	- / 2.166	- / 0.743	- / -	- / 0.743	- / 3.026	- / 2.310	- / 3.136	- / 2.394	- / 18.618	- / 33.992	
Support (All Modification Items)													
2.1) Variable Speed Drive Engineering Services	- / -	- / 0.082	- / 0.202	- / 0.105	- / -	- / 0.105	- / 0.107	- / 0.109	- / 0.111	- / 0.113	- / 1.634	- / 2.463	
<i>Subtotal: Support</i>	- / 0.000	- / 0.082	- / 0.202	- / 0.105	- / -	- / 0.105	- / 0.107	- / 0.109	- / 0.111	- / 0.113	- / 1.634	- / 2.463	
Installation													
<i>Modification Item 1 of 1:</i> GB004 - Maritime Energy Initiatives (VSD for CPS)	- / 0.000	- / 0.336	- / 2.049	- / 2.765	- / -	- / 2.765	- / 1.211	- / 3.973	- / 3.165	- / 4.117	- / 27.859	- / 45.475	
<i>Subtotal: Installation</i>	- / 0.000	- / 0.336	- / 2.049	- / 2.765	- / -	- / 2.765	- / 1.211	- / 3.973	- / 3.165	- / 4.117	- / 27.859	- / 45.475	
Total													
Total Cost (Procurement + Support + Installation)	0.000	2.017	4.417	3.613	-	3.613	4.344	6.392	6.412	6.624	48.111	81.930	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Modification Number / Title: 3 / GB004 - Maritime Energy Initiatives (VSD for CPS)

Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (VSD for CPS)

Manufacturer Information

Manufacturer Name: Rockwell Automation	Manufacturer Location: Cleveland, OH
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Aug 2015	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	
Delivery Dates	Aug 2016	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	

Installation Information

Method of Implementation: AIT:: Installation Name: Variable Speed Drive Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / 0.336	2 / 1.536	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.872
FY 2016	- / -	- / -	- / 0.513	3 / 2.694	- / -	3 / 2.694	- / -	- / -	- / -	- / -	- / -	3 / 3.207
FY 2017	- / -	- / -	- / -	- / 0.071	- / -	- / 0.071	1 / 0.921	- / -	- / -	- / -	- / -	1 / 0.992
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.290	4 / 3.751	- / -	- / -	- / -	4 / 4.041
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.222	3 / 2.864	- / -	- / -	3 / 3.086
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.301	4 / 3.887	- / -	4 / 4.188
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.230	3 / 2.968	3 / 3.198
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 24.891	24 / 24.891
Total	- / -	- / 0.336	2 / 2.049	3 / 2.765	- / -	3 / 2.765	1 / 1.211	4 / 3.973	3 / 3.165	4 / 4.117	27 / 27.859	44 / 45.475

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	1	-	-	1	-	-	-	4	-	-	-	3	-	-	-	4	-	-	27	44
Out	-	-	-	-	-	-	-	-	-	-	2	-	2	1	-	-	1	-	-	-	4	-	-	-	3	-	-	-	4	27	44

Footnotes:

(15) August 2016 delivery date was established to support the two ships targeted for installation in September 2016. Installation costs include planning support that is conducted the year prior to installation (i.e., \$0.336M installation cost in FY15 refers to the prior year planning for FY16 installation). Installation cost increases starting in FY20 vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2				P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E				Modification Number / Title: 4 / GB004 - Maritime Energy Initiatives (SSL)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	5.262	4.165	3.119	-	3.119	5.543	2.700	4.075	1.117	2.210	28.191
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	5.262	4.165	3.119	-	3.119	5.543	2.700	4.075	1.117	2.210	28.191
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	5.262	4.165	3.119	-	3.119	5.543	2.700	4.075	1.117	2.210	28.191
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

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

Engineering Services:

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

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2					P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E					Modification Number / Title: 4 / GB004 - Maritime Energy Initiatives (SSL)			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (SSL)</i>													
B Kits													
Recurring													
1.1.1) Solid State Lighting Equipment - NonOrganic	- / -	6 / 2.978	4 / 1.992	3 / 1.487	- / -	3 / 1.487	5 / 2.523	2 / 1.028	3 / 1.569	1 / 0.532	2 / 1.075	26 / 13.184	
1.1.2) Hanger Bay Solid State Lighting Equipment (SSL) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.125	4 / 0.170	6 / 0.260	- / -	- / -	13 / 0.555	
<i>Subtotal: Recurring</i>	- / 0.000	- / 2.978	- / 1.992	- / 1.487	- / -	- / 1.487	- / 2.648	- / 1.198	- / 1.829	- / 0.532	- / 1.075	- / 13.739	
<i>Subtotal: GB004 - Maritime Energy Initiatives (SSL)</i>	- / -	6 / 2.978	4 / 1.992	3 / 1.487	- / -	3 / 1.487	8 / 2.648	6 / 1.198	9 / 1.829	1 / 0.532	2 / 1.075	39 / 13.739	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 2.978	- / 1.992	- / 1.487	- / -	- / 1.487	- / 2.648	- / 1.198	- / 1.829	- / 0.532	- / 1.075	- / 13.739	
Support (All Modification Items)													
2.1) Solid State Lighting Engineering Services	- / -	- / 0.039	- / 0.093	- / 0.049	- / -	- / 0.049	- / 0.094	- / 0.095	- / 0.098	- / 0.053	- / 0.052	- / 0.573	
<i>Subtotal: Support</i>	- / 0.000	- / 0.039	- / 0.093	- / 0.049	- / -	- / 0.049	- / 0.094	- / 0.095	- / 0.098	- / 0.053	- / 0.052	- / 0.573	
Installation													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (SSL)</i>	- / 0.000	- / 2.245	- / 2.080	- / 1.583	- / -	- / 1.583	- / 2.801	- / 1.407	- / 2.148	- / 0.532	- / 1.083	- / 13.879	
<i>Subtotal: Installation</i>	- / 0.000	- / 2.245	- / 2.080	- / 1.583	- / -	- / 1.583	- / 2.801	- / 1.407	- / 2.148	- / 0.532	- / 1.083	- / 13.879	
Total													
Total Cost (Procurement + Support + Installation)	0.000	5.262	4.165	3.119	-	3.119	5.543	2.700	4.075	1.117	2.210	28.191	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Modification Number / Title: 4 / GB004 - Maritime Energy Initiatives (SSL)

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

Manufacturer Information

Manufacturer Name: Energy Focus Inc.	Manufacturer Location: Solon, OH
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 6

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Nov 2014	Nov 2015	Nov 2016	Nov 2017	Nov 2018	Nov 2019	
Delivery Dates	May 2015	May 2016	May 2017	May 2018	May 2019	May 2020	

Installation Information

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	6 / 2.245	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.245
FY 2016	- / -	- / -	4 / 2.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.080
FY 2017	- / -	- / -	- / -	3 / 1.583	- / -	3 / 1.583	- / -	- / -	- / -	- / -	- / -	3 / 1.583
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.521	- / -	- / -	- / -	- / -	5 / 2.521
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.026	- / -	- / -	- / -	2 / 1.026
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.567	- / -	- / -	3 / 1.567
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.532	- / -	1 / 0.532
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.083	2 / 1.083
Total	- / -	6 / 2.245	4 / 2.080	3 / 1.583	- / -	3 / 1.583	5 / 2.521	2 / 1.026	3 / 1.567	1 / 0.532	2 / 1.083	26 / 12.637

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot					
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	-	-	-	3	3	-	-	4	-	-	-	-	3	-	-	-	-	5	-	-	-	-	2	-	-	-	-	3	-	-	-	-	1	-	2	26
Out	-	-	-	-	-	3	3	-	-	4	-	-	3	-	-	-	-	5	-	-	-	-	2	-	-	-	-	3	-	-	-	-	1	-	2	26

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Modification Number / Title: 4 / GB004 - Maritime Energy Initiatives (SSL)

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

Installation Information

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.280	- / -	- / -	- / -	- / -	3 / 0.280
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.381	- / -	- / -	- / -	4 / 0.381
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.581	- / -	- / -	6 / 0.581
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.280	4 / 0.381	6 / 0.581	- / -	- / -	13 / 1.242

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	4	-	-	-	6	-	-	-	-	-	-	13
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	4	-	-	-	6	-	-	-	-	-	-	13

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2				P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E				Modification Number / Title: 5 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.246	0.612	0.298	-	0.298	0.217	-	-	-	-	1.373
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.246	0.612	0.298	-	0.298	0.217	-	-	-	-	1.373
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.246	0.612	0.298	-	0.298	0.217	-	-	-	-	1.373
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

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

Engineering Services:

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

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2					P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E					Modification Number / Title: 5 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA)			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA)</i>													
B Kits													
Recurring													
1.1.1) Shipboard Energy Dashboard FLT IIA Equipment - NonOrganic ⁽¹⁶⁾	- / -	5 / 0.205	2 / 0.083	2 / 0.086	- / -	2 / 0.086	- / -	- / -	- / -	- / -	- / -	9 / 0.374	
<i>Subtotal: Recurring</i>	- / 0.000	- / 0.205	- / 0.083	- / 0.086	- / -	- / 0.086	- / -	- / -	- / -	- / -	- / -	- / 0.374	
<i>Subtotal: GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA)</i>	- / -	5 / 0.205	2 / 0.083	2 / 0.086	- / -	2 / 0.086	- / -	- / -	- / -	- / -	- / -	9 / 0.374	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 0.205	- / 0.083	- / 0.086	- / -	- / 0.086	- / -	- / -	- / -	- / -	- / -	- / 0.374	
Support (All Modification Items)													
2.1) Shipboard Energy Dashboard FLT IIA Engineering Services	- / -	- / 0.041	- / 0.110	- / 0.041	- / -	- / 0.041	- / 0.043	- / -	- / -	- / -	- / -	- / 0.235	
<i>Subtotal: Support</i>	- / 0.000	- / 0.041	- / 0.110	- / 0.041	- / -	- / 0.041	- / 0.043	- / -	- / -	- / -	- / -	- / 0.235	
Installation													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA)</i>	- / 0.000	- / -	- / 0.419	- / 0.171	- / -	- / 0.171	- / 0.174	- / -	- / -	- / -	- / -	- / 0.764	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 0.419	- / 0.171	- / -	- / 0.171	- / 0.174	- / -	- / -	- / -	- / -	- / 0.764	
Total													
Total Cost (Procurement + Support + Installation)	0.000	0.246	0.612	0.298	-	0.298	0.217	-	-	-	-	1.373	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Modification Number / Title: 5 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA)

Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT IIA)

Manufacturer Information

Manufacturer Name: Hoffer Flow Controls, Inc.	Manufacturer Location: Elizabeth City, NC
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2015	Jan 2016	Feb 2017				
Delivery Dates	Mar 2016	Jan 2017	Feb 2018				

Installation Information

Method of Implementation: AIT:: Installation Name: Shipboard Energy Dashboard FLT IIA Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	5 / 0.419	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.419
FY 2016	- / -	- / -	- / -	2 / 0.171	- / -	2 / 0.171	- / -	- / -	- / -	- / -	- / -	2 / 0.171
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.174	- / -	- / -	- / -	- / -	2 / 0.174
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	5 / 0.419	2 / 0.171	- / -	2 / 0.171	2 / 0.174	- / -	- / -	- / -	- / -	9 / 0.764

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	3	2	-	-	2	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	3	2	-	-	-	2	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:
⁽¹⁶⁾ \$0.485M for 6 Shipboard Energy Dashboard Fit IIA installations in FY15 is captured in the P-40a Exhibit (GB004 4.1). This is due to the fact that installations tied to prior year procurements made under different BLIs cannot be properly captured on the BLI 0200 P-3a Exhibit. Shipboard Energy Dashboard Fit IIA effort planned to complete in FY17.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2				P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E				Modification Number / Title: 6 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	-	0.877	0.873	11.233	12.983
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	-	0.877	0.873	11.233	12.983
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	-	0.877	0.873	11.233	12.983
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

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

Engineering Services:

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

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2					P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E					Modification Number / Title: 6 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I)			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I)</i>													
B Kits													
Recurring													
1.1.1) Shipboard Energy Dashboard FLT I Equipment - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.687	1 / 0.350	15 / 6.460	18 / 7.497	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.687	- / 0.350	- / 6.460	- / 7.497	
<i>Subtotal: GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I)</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.687	1 / 0.350	15 / 6.460	18 / 7.497	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.687	- / 0.350	- / 6.460	- / 7.497	
Support (All Modification Items)													
2.1) Shipboard Energy Dashboard FLT I Engineering Services													
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.057	- / 0.072	- / 0.285	- / 0.414	
Installation													
<i>Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I)</i>													
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.133	- / 0.451	- / 4.488	- / 5.072	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	-	-	0.877	0.873	11.233	12.983	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Modification Number / Title: 6 / GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I)

Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (Shipboard Energy Dashboard FLT I)

Manufacturer Information

Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 12			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates						Dec 2019	Dec 2020
Delivery Dates						Dec 2020	Dec 2021

Installation Information

Method of Implementation: [none specified]:: Installation Name: Shipboard Energy Dashboard FLT I Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.133	2 / 0.383	- / -	2 / 0.516
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.068	1 / 0.190	1 / 0.258
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 4.298	15 / 4.298
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.133	2 / 0.451	16 / 4.488	18 / 5.072

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	16	18
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	16	18

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2				P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E				Modification Number / Title: 7 / GB004 - Maritime Energy Initiatives (Triton Fuel Penalty)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	0.351	0.884	0.912	9.836	11.983
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	0.351	0.884	0.912	9.836	11.983
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	0.351	0.884	0.912	9.836	11.983
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Triton Fuel Penalty is a system capable of reporting in real time when a ship's powering condition has degraded due to increased drag from bio fouling. Personnel will be able to schedule ship cleanings utilizing feedback taken from actual measurements of drag while in service. This capability will reduce the current penalty paid by the fleet to overcome the negative effects of biological fouling on ship performance and fuel expenditure.

Engineering Services:

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

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2					P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E					Modification Number / Title: 7 / GB004 - Maritime Energy Initiatives (Triton Fuel Penalty)			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> GB004 - Maritime Energy Initiatives (Triton Fuel Penalty)													
B Kits													
Recurring													
1.1.1) Triton Fuel Penalty Equipment - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.279	1 / 0.284	1 / 0.289	16 / 4.527	19 / 5.379	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.279	- / 0.284	- / 0.289	- / 4.527	- / 5.379	
<i>Subtotal: GB004 - Maritime Energy Initiatives (Triton Fuel Penalty)</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.279	1 / 0.284	1 / 0.289	16 / 4.527	19 / 5.379	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.279	- / 0.284	- / 0.289	- / 4.527	- / 5.379	
Support (All Modification Items)													
2.1) Triton Fuel Penalty Engineering Services	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.058	- / 0.071	- / 0.316	- / 0.445	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.058	- / 0.071	- / 0.316	- / 0.445	
Installation													
<i>Modification Item 1 of 1:</i> GB004 - Maritime Energy Initiatives (Triton Fuel Penalty)	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.072	- / 0.542	- / 0.552	- / 4.993	- / 6.159	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.072	- / 0.542	- / 0.552	- / 4.993	- / 6.159	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	-	0.351	0.884	0.912	9.836	11.983	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 2	P-1 Line Item Number / Title: 0200 / Surface Combatant HM&E	Modification Number / Title: 7 / GB004 - Maritime Energy Initiatives (Triton Fuel Penalty)

Modification Item 1 of 1: GB004 - Maritime Energy Initiatives (Triton Fuel Penalty)

Manufacturer Information

Manufacturer Name: RDI Instruments	Manufacturer Location: Poway, CA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates					Dec 2018	Dec 2019	
Delivery Dates					Dec 2019	Dec 2020	

Installation Information

Method of Implementation: AIT:: Installation Name: Triton Fuel Penalty Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.072	1 / 0.469	- / -	- / -	1 / 0.541
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.073	1 / 0.477	- / -	1 / 0.550
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.075	1 / 0.486	1 / 0.561
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 4.507	16 / 4.507
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.072	1 / 0.542	1 / 0.552	17 / 4.993	19 / 6.159

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	17	19
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	17	19

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment
---	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	266.791	39.298	87.481	63.942	-	63.942	65.002	108.772	121.780	124.285	-	877.351
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	266.791	39.298	87.481	63.942	-	63.942	65.002	108.772	121.780	124.285	-	877.351
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	266.791	39.298	87.481	63.942	-	63.942	65.002	108.772	121.780	124.285	-	877.351

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	0.188	-	-	-	0.188
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY2017 funding request was reduced \$6.480 million to account for the availability of prior year execution balances.

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

[P40A / GW013: CONVENTIONAL NAVIGATION FIELD CHANGE KITS]: These funds are required to procure Navigation Field Change Kits for reliability and maintainability improvements and corrections for various conventional navigation equipment including the Dead Reckoning Equipment (DRE), Computer Aided Dead Reckoning Tracer (CADRT), plotters, gyrocompasses, Electromagnetic Log (EM Log), Doppler Sonar Velocity Log

(DSVL), Digital Flux Gate Magnetic Compass, Digital Depth Detector and Synchronization Signal Amplifier. These improvements are required to keep Fleet-installed equipment operating to a basic level. This cost code funds multiple Field Changes of various quantities, costs, and fielding plans.

[P40A / GW029: INERTIAL NAVIGATION SYSTEMS FIELD CHANGE KITS]: These funds are required in order to support procurement and implementation of Engineering Change Proposals (ECPs)/ Field Change (FC) Kits, alterations and update of associated technical documentation which provide reliability and maintainability improvements, corrections and upgrades for various Inertial Navigation Systems (INS), (AN/WSN-7/7A/7B), the associated IP-1747 Control Display Unit (CDU), and IP-1747 Enhanced Control Display Unit (ECDU) and Aircraft Inertial Alignment System (AIAS) (AN/SRC-40, OU-174, TS-3543A). Funds also support procurement of hardware and software changes to the navigation suite required to integrate with Ring Laser Gyro Navigator (AN/WSN-7/7A), and Ring Laser Gyrocompass (AN/WSN-7B) and Test & Integration. Funds will support technology refresh to replace parts obsolescence and keep pace with technology. Funds required to perform navigation certification required as prerequisite to TOMAHAWK certification. This cost code funds multiple Field Changes of various quantities, costs, and fielding plans.

- Field Change #1 to the AN/WSN-7/7A provides product improvement changes and additions to the basic system equipment to correct problems and provide enhancements to ship specific missions.
- Field Change #2 to the AN/WSN-7 provides interface between WSN-7 and Battle Force Tactical Trainer (BFTT) product improvement changes and additions to the basic system equipment to correct problems and provide enhancements to ship specific missions.
- Field Change #3 to the AN/WSN-7 provides hardware and software updates.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment		P-1 Line Item Number / Title: 0670 / Other Navigation Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>- Field Change #4 to the AN/WSN-7 provides firmware changes to correct interfaces with Cooperative Engagement Capability (CEC) and Command & Decision (C&D) and provides short-term accuracy improvements for Ticonderoga Class Guided Missile Cruiser (AEGIS-CG) and Ballistic Defense Missile System (BDMS). Field Change #4 to the AN/WSN-7A provides ECDU hardware and software to correct Integral of Velocity rollover problem and provide an interface to the AN/BYG-1 Combat Control System (CCS).</p> <p>- Field Change #5 to the AN/WSN-7/7A provides firmware changes to add capability for inertial damping and for indexing control to improve navigation accuracy for combat systems. Also provides functionality to support AN/BYG-1 CCS.</p> <p>- AIAS product improvements to AN/SRC-40, OU-174, TS-3543A due to obsolescence.</p> <p>- Field Change #6 to the AN/WSN-7/7A provides upgraded MX-11681A Inertial Measuring Unit (IMU) for structure-borne noise reduction.</p> <p>- Field Change #7 to the AN/WSN-7/7A provides CDU software version 3.0.0 to include Information Assurance (IA) and the Linux Operating System. (Surface and Submersible Ship Nuclear (SSN) 776/77 only)</p> <p>- Field Change #8 to the AN/WSN-7A provides Naval Tactical Data System (NTDS) Type A for Tactical TOMAHAWK Weapons Control Systems (TTWCS). (Submersible Ship Guided Nuclear (SSGN) Class only)</p> <p>- Field Change #9 to the AN/WSN-7 converts AN/WSN-7(V)2 to AN/WSN-7(V)3. Landing Helicopter Dock (LHD) 1 and 2 only).</p> <p>- Field Change #10 to the AN/WSN-7A provides CDU upgrades to include IA and the Linux Operating System. (SSN 688 Class, SSGN, and SSN 21/22)</p> <p>- Field Change #11 to the AN/WSN-7 provides Ethernet cable connection, upgrades software in the CDU to version 2.0.6 to enable Integrated Bridge System (IBS) interface with Ring Laser Gyro Navigator (RLGN) and Global Positioning System (GPS), AEGIS CG's only.</p> <p>- Field Change #12 to the AN/WSN-7A provides Unit 8, IP-1747 CDU with Windows Program (WINP) Software version 2.0.0, Run Time Program (RTP) version 4/2/0, and Enhanced SABTECH Review Board (ESRB) version 2.2.5. (SSN 23 only)</p> <p>- Field Change #13 to the AN/WSN-7A provides Unit 6, IP-1747 CDU (72213) with IP-1747 CDU (501300). ECDU architecture with dual Global Positioning System Versa Module Eurocard Receiver Card (GVRC) replaces Navigation Data Distribution and Display (ND3) functionality. (SSN 774 Class only)</p> <p>- Field Change #14 to the AN/WSN-7A provides Technical Insertion (TI-06): Adds Vertical Deflection Compensation, BQN-17A Interface, and Health Monitoring.</p> <p>- Field Change #15 to the AN/WSN-7A provides Technical Insertion (TI-08): Replaces ECDU GVRC cards with Selective Availability Anti Spoofing Module (SAASM) Receiver, adds Internet Protocol Version 6 (IPV) compliance, and reliability improvements.</p> <p>- Field Change #16 to the AN/WSN-7A provides Technical Insertion (TI-10): Incorporates Precision Underwater Mapping (PUMA) and Correlation Navigation.</p> <p>- Field Change #17 to the AN/WSN-7A provides Technical Insertion (TI-12): Incorporates ECDU GPS (M-Code).</p> <p>- Field Change #18 to the AN/WSN-7A provides firmware upgrades: Navigation processor Revision AE and Input/output (I/O) processor Revision AA (SSN & SSGN only).</p> <p>- Field Change #19 to the AN/WSN-7A provides power circuitry modifications in AN/WSN-7A(V)1,2 to meet the requirements of Military Standard (MIL-STD)-1399B/300A. (SSN 774 Class only)</p> <p>- Field Change #20 to the AN/WSN-7/7A provides firmware upgrades: Navigation processor Revision AF and I/O processor Revision AB.</p> <p>-Field Change #21 to the AN/WSN-7A provides Technical Insertion (TI-14): Incorporates TBD changes.</p> <p>-Field Change #22 to the AN/WSN-7/7A provides firmware upgrades: Navigation Processor Revision AG and I/O Processor revision AC will enhance BMD performance and provide improved at sea diagnostic capability.</p> <p>-Field Change #23 to the AN/WSN-7A provides Technical Insertion (TI-16): Incorporates TBD changes.</p> <p>-Field Change #24 to the AN/WSN-7A provides Technical Insertion (TI-18): Incorporates TBD changes.</p> <p> </p> <p>- Other AN/WSN-7 operational improvements include Navigation Sensor System Interface (NAVSSI) integration, Lever Arm definition, vertical deflection compensation, Asynchronous Transfer Mode (ATM) implementation, Tactical Integrated Distribution System (TIDS) integration, and WSN-7A BYG-1 CCS Field Change Kits.</p> <p> </p> <p>[P40A / GW038: BPS ECDIS-N/VMS FC KITS:]: These funds are required to provide AN/BPS-15/16 - Voyage Management System (VMS) Field Changes to provide ECDIS-N capability and to support obsolescence replacement on submarines.</p> <p> </p> <p>[P40A / GW051: SCALABLE ECDIS-N ECP/FIELD CHANGE KITS:]: These funds are required for the procurement and installation of ECDIS-N ECP/Field Change Kits to support hardware tech refresh, software upgrades to incorporate latest functions and safety enhancements, obsolescence replacement, and for engineering services associated with interfacing systems on multiple platforms.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment		P-1 Line Item Number / Title: 0670 / Other Navigation Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / GW054: NAVIGATION TRAINING EQUIPMENT]: Funds are required for the procurement of training equipment for multiple Navigation classrooms in support of Navigation System Technician pipeline training and ECDIS-N Operator Training. This includes computer upgrades and software licenses. These upgrades are critical to maintaining Fleet proficiency on operation and maintenance of navigation systems. Field Changes include ECDIS-N Operator Course Classroom Tech Refresh and additional seats and licenses and upgrade/update Mariner Skills Simulator (MSS) to support Fleet Training Requirements (Radar/Data bases/Models).</p> <p>[P40A / GW056 ECDIS-N MODERNIZATION]: These funds are required to provide centralized and cost effective lifecycle sustainment and modernization of ECDIS-N solutions. Funding is required to manage and execute ECDIS-N hardware and software upgrades and competitive efforts for follow-on ECDIS-N solution.</p> <p>[P40A / GW057 INERTIAL NAVIGATION SYSTEM MODERNIZATION]: Funding is for modernization of Inertial Navigation Systems (INS) to address obsolescence and provide improved performance in support of submarine missions. Costs include analyses, delta testing, documentation, and logistics efforts.</p> <p>[P40A / GW830: PRODUCTION ENGINEERING]: These funds are required for production engineering for the AN/WSN-7/7A, AN/WSN-7B, CDU, ECDU, AIAS Scalable ECDIS-N Systems, and BPS ECDIS-N/VMS Systems hardware/software procurements and system test and integration.</p> <p>[P40A / GW063: NAVIGATION CERTIFICATION]: These funds are required for conducting Navigation Certification (NAVCERT) on amphibious, surface and carrier platforms as part of fielded upgrades and tech refresh.</p> <p>[P40A / GW064: OWN SHIP SPEED (OSS) AND COURSE REPEATERS]: These funds are required for the fielding of Own Ship Speed (OSS) and Course Repeaters.</p> <p>[P40A / GW065: NAVIGATION SHORESITE EQUIPMENT]: These funds are required for the procurement and NRE/ILS/Support of navigation system shoresite equipment. Shoresite equipment does not have any associated installation costs. FY16 funding is for the procurement of 3 AN/WSN-7B Ring Laser Gyrocompass to support LSD shoresites.</p> <p>[P40A / GW066: SSBN NAVIGATION SENSOR OBSOLESCENCE]: Initiated in PB17 for Procurement and NRE/ILS/Support of replacement Navigation Sensors on SSBN Platforms.</p> <p>[P3A / GW036: RING LASER GYRO COMPASS (AN/WSN-7B)]: These funds are required for the procurement and installation of the AN/WSN-7B Ring Laser Gyrocompass (RLG) for SSN, MCM, and LSD platforms. System peripherals include Sync Amps, BIT Cables, and installation kits. MCM ships require quantity (2) AN/WSN-7B per ship.</p> <p>[P3A - 2 / GW050: SCALABLE ECDIS-N]: These funds are required for procurement of Scalable ECDIS-N systems for surface and amphibious platforms. All installations completed in FY14.</p> <p>[P3A - 3 / GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION]: These funds are required for modernization of Inertial Navigation Systems (INS) to address obsolescence and provide improved performance in support of Ballistic Missile Defense (BMD) and amphibious platforms. Current INS-R development schedule is targeting production procurement and installation beginning in FY19.</p> <p>[P3A - 4 / GW055: AN/WSN-9 SPEED LOG PROCUREMENT]: These funds are for the procurement of AN/WSN-9 Speed Log upgrades on amphibious, surface and carrier platforms.</p> <p>[P3A - 5 / GW058: NAVSSI CAPSTONE]: These funds are required for the procurement, installation, and NRE/ILS/Support of NAVSSI Capstone upgrades on LHD platforms to support Ship Self Defense System (SSDS) upgrades.</p> <p>[P3A - 6 / GW059: EMERGENCY NAVIGATION LAPTOP]: These funds are required for the procurement, installation, and NRE/ILS/support of Emergency Navigation Laptops (ENL) on amphibious, surface and carrier platforms.</p> <p>[P3A - 7 / GW060: NEXT GENERATION FATHOMETER]: These funds are required for the procurement, installation, and NRE/ILS/support of Next Generation Fathometers to replace legacy AN/UQN-4/4A systems on amphibious, surface and carrier platforms.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment		P-1 Line Item Number / Title: 0670 / Other Navigation Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P3A - 8 / GW061: MK 27 REPLACEMENT]: These funds are required for the procurement, installation, and NRE/ILS/support of replacement for legacy MK27 Backup Heading References on amphibious and surface platforms.</p> <p>[P3A - 9 / GW062: AN/WSN-7 CDU TECH REFRESH]: These funds are required for the procurement, installation, and NRE/ILS/support of replacement for legacy AN/WSN-7 Control Display Units on amphibious, surface and carrier platforms.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

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

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

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Other Navigation Equipment	P-5a		- / 166.531	- / 34.605	- / 56.432	- / 37.030	- / -	- / 37.030
P-3a	1 / GW036: RING LASER GYRO COMPASS (AN/WSN-7B) (AN/WSN-7B)			- / 61.897	- / 2.654	- / 5.100	- / 4.367	- / -	- / 4.367
P-3a	2 / GW050: SCALABLE ECDIS-N (SCALABLE ECDIS-N)			- / 36.463	- / -	- / -	- / -	- / -	- / -
P-3a	3 / GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION (INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-3a	4 / GW055: AN/WSN-9 SPEED LOG PROCUREMENT (AN/WSN-9 SPEED LOG PROCUREMENT)			- / 1.900	- / 2.039	- / 8.988	- / 7.313	- / -	- / 7.313
P-3a	5 / GW058: NAVSSI CAPSTONE (NAVSSI CAPSTONE)			- / 0.000	- / -	- / 1.613	- / 1.314	- / -	- / 1.314
P-3a	6 / GW059: EMERGENCY NAVIGATION LAPTOP (EMERGENCY NAVIGATION LAPTOP)			- / 0.000	- / -	- / 5.654	- / 2.983	- / -	- / 2.983
P-3a	7 / GW060: NEXT GENERATION FATHOMETER (NEXT GENERATION FATHOMETER)			- / 0.000	- / -	- / 5.333	- / 8.481	- / -	- / 8.481
P-3a	8 / GW061: MK 27 REPLACEMENT (MK 27 REPLACEMENT)			- / 0.000	- / -	- / 2.088	- / 2.094	- / -	- / 2.094
P-3a	9 / GW062: AN/WSN-7 CDU TECH REFRESH (AN/WSN-7 CDU TECH REFRESH)			- / 0.000	- / -	- / 2.273	- / 0.360	- / -	- / 0.360
P-40	Total Gross/Weapon System Cost			- / 266.791	- / 39.298	- / 87.481	- / 63.942	- / -	- / 63.942

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Other Navigation Equipment	P-5a		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / GW036: RING LASER GYRO COMPASS (AN/WSN-7B) (AN/WSN-7B)			- / 0.840	- / -	- / -	- / -	- / -	- / 74.858
P-3a	2 / GW050: SCALABLE ECDIS-N (SCALABLE ECDIS-N)			- / -	- / -	- / -	- / -	- / -	- / 36.463
P-3a	3 / GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION (INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION)			- / -	- / 45.233	- / 67.841	- / 68.473	- / -	- / 181.547
P-3a	4 / GW055: AN/WSN-9 SPEED LOG PROCUREMENT (AN/WSN-9 SPEED LOG PROCUREMENT)			- / 3.300	- / 3.043	- / 0.604	- / -	- / -	- / 27.187
P-3a	5 / GW058: NAVSSI CAPSTONE (NAVSSI CAPSTONE)			- / 3.010	- / 1.702	- / 1.387	- / -	- / -	- / 9.026
P-3a	6 / GW059: EMERGENCY NAVIGATION LAPTOP (EMERGENCY NAVIGATION LAPTOP)			- / 0.858	- / 0.176	- / -	- / 0.164	- / -	- / 9.835
P-3a	7 / GW060: NEXT GENERATION FATHOMETER (NEXT GENERATION FATHOMETER)			- / -	- / -	- / -	- / -	- / -	- / 13.814
P-3a	8 / GW061: MK 27 REPLACEMENT (MK 27 REPLACEMENT)			- / -	- / -	- / -	- / 0.430	- / -	- / 4.612
P-3a	9 / GW062: AN/WSN-7 CDU TECH REFRESH (AN/WSN-7 CDU TECH REFRESH)			- / 0.630	- / 2.640	- / 2.079	- / 2.809	- / -	- / 10.791
P-40	Total Gross/Weapon System Cost			- / 65.002	- / 108.772	- / 121.780	- / 124.285	- / -	- / 877.351

*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.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 6: Navigation Equipment		P-1 Line Item Number / Title: 0670 / Other Navigation Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.		

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy																Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6						P-1 Line Item Number / Title: 0670 / Other Navigation Equipment						Aggregated Items Title: Other Navigation Equipment								
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) GW013: CONVENTIONAL NAVIGATION FIELD CHANGE KITS																				
1.1) SURFACE CONVENTIONAL NAVIGATION FC KITS	A		-	-	6.350	-	-	0.818	-	-	0.829	-	-	0.856	-	-	-	-	-	0.856
1.2) SUBMARINE CONVENTIONAL NAVIGATION FC KITS	A		-	-	16.920	-	-	2.915	-	-	2.893	-	-	2.255	-	-	-	-	-	2.255
Subtotal: 1) GW013: CONVENTIONAL NAVIGATION FIELD CHANGE KITS			-	-	23.270	-	-	3.733	-	-	3.722	-	-	3.111	-	-	-	-	-	3.111
2) GW029: INERTIAL NAVIGATION SYSTEMS FIELD CHANGE KITS																				
2.1) SURFACE INERTIAL NAV SYS ECP/FC KITS	A		-	-	13.484	-	-	3.986	-	-	4.725	-	-	2.854	-	-	-	-	-	2.854
2.2) SUBMARINE INERTIAL NAV SYS ECP/FC KITS	A		-	-	30.128	-	-	3.962	-	-	3.098	-	-	3.196	-	-	-	-	-	3.196
2.3) CARRIER INERTIAL NAV SYS ECP/FC KITS	A		-	-	14.474	-	-	1.475	-	-	1.352	-	-	1.397	-	-	-	-	-	1.397
Subtotal: 2) GW029: INERTIAL NAVIGATION SYSTEMS FIELD CHANGE KITS			-	-	58.086	-	-	9.423	-	-	9.175	-	-	7.447	-	-	-	-	-	7.447
3) GW038: BPS ECDIS-N/VMS FC KITS:																				
3.1) SUBMARINE BPS ECDIS-N/VMS FC KITS:	A		-	-	41.397	-	-	2.995	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) GW038: BPS ECDIS-N/VMS FC KITS:			-	-	41.397	-	-	2.995	-	-	-	-	-	-	-	-	-	-	-	-
4) GW051: SCALABLE ECDIS-N ECP/FIELD CHANGE KITS:																				
4.1) SURFACE SCALABLE ECDIS-N ECP/ FIELD CHANGE KITS	A		-	-	20.070	-	-	12.257	-	-	19.297	-	-	9.644	-	-	-	-	-	9.644
4.2) CARRIER SCALABLE ECDIS-N ECP/FIELD CHANGE KITS:	A		-	-	5.831	-	-	-	-	-	-	-	2.380	-	-	-	-	-	-	2.380
Subtotal: 4) GW051: SCALABLE ECDIS-N ECP/FIELD CHANGE KITS:			-	-	25.901	-	-	12.257	-	-	19.297	-	-	12.024	-	-	-	-	-	12.024
5) GW054: NAVIGATION TRAINING EQUIPMENT																				
5.1) SURFACE NAVIGATION TRAINING EQUIPMENT	A		-	-	1.807	-	-	0.601	-	-	0.598	-	-	0.601	-	-	-	-	-	0.601

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy															Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										Aggregated Items Title:					
1810N / 01 / 6					0670 / Other Navigation Equipment										Other Navigation Equipment					
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) GW054: NAVIGATION TRAINING EQUIPMENT			-	-	1.807	-	-	0.601	-	-	0.598	-	-	0.601	-	-	-	-	-	0.601
6) GW056 ECDIS-N MODERNIZATION																				
6.1) SURFACE ECDIS-N MODERNIZATION (1)	A		-	-	-	-	-	3.970	-	-	1.792	-	-	4.169	-	-	-	-	-	4.169
Subtotal: 6) GW056 ECDIS-N MODERNIZATION			-	-	0.000	-	-	3.970	-	-	1.792	-	-	4.169	-	-	-	-	-	4.169
8) GW830: PRODUCTION ENGINEERING																				
8.1) SURFACE PRODUCTION ENGINEERING	A		-	-	7.836	-	-	0.783	-	-	0.749	-	-	0.741	-	-	-	-	-	0.741
8.2) SUBMARINE PRODUCTION ENGINEERING	A		-	-	5.538	-	-	0.605	-	-	0.585	-	-	0.600	-	-	-	-	-	0.600
8.3) CARRIER PRODUCTION ENGINEERING	A		-	-	2.696	-	-	0.238	-	-	0.236	-	-	0.258	-	-	-	-	-	0.258
Subtotal: 8) GW830: PRODUCTION ENGINEERING			-	-	16.070	-	-	1.626	-	-	1.570	-	-	1.599	-	-	-	-	-	1.599
9) GW063: NAVIGATION CERTIFICATION																				
9.1) AMPHIB NAVIGATION CERTIFICATION	A		-	-	-	-	-	-	-	-	5.281	-	-	2.823	-	-	-	-	-	2.823
9.2) SURFACE NAVIGATION CERTIFICATION	A		-	-	-	-	-	-	-	-	10.453	-	-	3.714	-	-	-	-	-	3.714
9.3) CARRIER NAVIGATION CERTIFICATION	A		-	-	-	-	-	-	-	-	-	-	-	0.107	-	-	-	-	-	0.107
Subtotal: 9) GW063: NAVIGATION CERTIFICATION			-	-	0.000	-	-	-	-	-	15.734	-	-	6.644	-	-	-	-	-	6.644
10) GW064: OWN SHIP SPEED (OSS) AND COURSE REPEATERS																				
10.1) SURFACE OSS AND COURSE REPEATERS	A		-	-	-	-	-	-	-	-	0.200	-	-	0.135	-	-	-	-	-	0.135
Subtotal: 10) GW064: OWN SHIP SPEED (OSS) AND COURSE REPEATERS			-	-	0.000	-	-	-	-	-	0.200	-	-	0.135	-	-	-	-	-	0.135
11) GW065: NAVIGATION SHORESITE EQUIPMENT																				
11.1) NAVIGATION SHORESITE EQUIPMENT (†)	A		-	-	-	-	-	-	1,448K	3	4.344	-	-	-	-	-	-	-	-	-
Subtotal: 11) GW065: NAVIGATION SHORESITE EQUIPMENT			-	-	0.000	-	-	-	-	-	4.344	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6 **P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment **Aggregated Items Title:** Other Navigation Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
12) GW066: SSBN NAVIGATION SENSOR OBSOLESCENCE																				
12.1) SSBN Navigation Sensor Obsolescence	A		-	-	-	-	-	-	-	-	-	-	-	1.300	-	-	-	-	-	1.300
Subtotal: 12) GW066: SSBN NAVIGATION SENSOR OBSOLESCENCE			-	-	0.000	-	-	-	-	-	-	-	-	1.300	-	-	-	-	-	1.300
Total			-	-	166.531	-	-	34.605	-	-	56.432	-	-	37.030	-	-	-	-	-	37.030

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) GW056 - The work being performed in FY2016 is in preparation for contract award in FY2017. Capability Production Document (CPD) and Software Requirements Document (SRD) development and documentation by the ISEA/TDA are the primary tasks being accomplished in FY2016. GW056 - ECDIS-N Modernization efforts ramp up in FY2017 to accommodate the contract award planned for 1Q. Efforts will be focused on multiple design reviews (Integrated Baseline Review/Critical Design Review/Test Readiness Review), the inclusion of Navy specific capabilities to the COTS software and initial software testing.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Aggregated Items: Other Navigation 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
11) GW065: NAVIGATION SHORESITE EQUIPMENT												
11.1) NAVIGATION SHORESITE EQUIPMENT		2016	NORTHROP GRUMMAN / CHARLOTTESVILLE	SS / FFP	WASHINGTON, DC	Jan 2016	Feb 2017	3	1,448K	Y		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6				P-1 Line Item Number / Title: 0670 / Other Navigation Equipment				Modification Number / Title: 1 / GW036: RING LASER GYRO COMPASS (AN/WSN-7B)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	61.897	2.654	5.100	4.367	-	4.367	0.840	-	-	-	-	74.858
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	61.897	2.654	5.100	4.367	-	4.367	0.840	-	-	-	-	74.858
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	61.897	2.654	5.100	4.367	-	4.367	0.840	-	-	-	-	74.858
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for the procurement and installation of the AN/WSN-7B Ring Laser Gyrocompass (RLG) for SSN, MCM, and LSD platforms. System peripherals include Sync Amps, BIT Cables, and installation kits. MCM ships require quantity (2) AN/WSN-7B per ship.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 1 / GW036: RING LASER GYRO COMPASS (AN/WSN-7B)

Models of Systems Affected: GW036 RING LASER GYRO NAVIGATION RING LASER GYROCOMPASS (AN/WSN-7B)	Modification Type: AN/WSN-7B	Related RDT&E PEs:
--	-------------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> GW036: RING LASER GYRO COMPASS (AN/WSN-7B)												
B Kits												
Recurring												
1.1.1) AMPHIB AN/WSN-7B - NonOrganic ⁽²⁾	84 / 34.411	1 / 1.828	3 / 4.344	2 / 3.040	- / -	2 / 3.040	- / -	- / -	- / -	- / -	- / -	90 / 43.623
<i>Subtotal: Recurring</i>	- / 34.411	- / 1.828	- / 4.344	- / 3.040	- / -	- / 3.040	- / -	- / -	- / -	- / -	- / -	- / 43.623
<i>Subtotal: GW036: RING LASER GYRO COMPASS (AN/WSN-7B)</i>	84 / 34.411	1 / 1.828	3 / 4.344	2 / 3.040	- / -	2 / 3.040	- / -	- / -	- / -	- / -	- / -	90 / 43.623
<i>Subtotal: Procurement, All Modification Items</i>	- / 34.411	- / 1.828	- / 4.344	- / 3.040	- / -	- / 3.040	- / -	- / -	- / -	- / -	- / -	- / 43.623
Installation												
<i>Modification Item 1 of 1:</i> GW036: RING LASER GYRO COMPASS (AN/WSN-7B)	- / 27.486	- / 0.826	- / 0.756	- / 1.327	- / -	- / 1.327	- / 0.840	- / -	- / -	- / -	- / -	- / 31.235
<i>Subtotal: Installation</i>	- / 27.486	- / 0.826	- / 0.756	- / 1.327	- / -	- / 1.327	- / 0.840	- / -	- / -	- / -	- / -	- / 31.235
Total												
Total Cost (Procurement + Support + Installation)	61.897	2.654	5.100	4.367	-	4.367	0.840	-	-	-	-	74.858

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 1 / GW036: RING LASER GYRO COMPASS (AN/WSN-7B)

Modification Item 1 of 1: GW036: RING LASER GYRO COMPASS (AN/WSN-7B)

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP.	Manufacturer Location: CHARLOTTESVILLE, VA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 13

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Dec 2014	Dec 2015	Dec 2016				
Delivery Dates	Jan 2016	Jan 2017	Jan 2018				

Installation Information

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	82 / 27.486	2 / 0.826	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	84 / 28.312
FY 2015	- / -	- / -	1 / 0.405	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.405
FY 2016	- / -	- / -	- / 0.351	3 / 0.995	- / -	3 / 0.995	- / -	- / -	- / -	- / -	- / -	3 / 1.346
FY 2017	- / -	- / -	- / -	- / 0.332	- / -	- / 0.332	2 / 0.840	- / -	- / -	- / -	- / -	2 / 1.172
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	82 / 27.486	2 / 0.826	1 / 0.756	3 / 1.327	- / -	3 / 1.327	2 / 0.840	- / -	- / -	- / -	- / -	90 / 31.235

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	82	-	-	2	-	-	-	1	-	-	-	-	3	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
Out	82	-	-	2	-	-	-	1	-	-	-	-	3	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90

Footnotes:
 (2) GW036: Funding provides for procurement and installation of 8 systems for LSD platforms. FY17 installation funding (\$0.332M) is for DSA activities to support FY18 AIT installations and (\$0.995M) is for AIT installation on LSD (qty 3) procured in FY16.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 2 / GW050: SCALABLE ECDIS-N
---	---	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	36.463	-	-	-	-	-	-	-	-	-	-	36.463
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	36.463	-	-	-	-	-	-	-	-	-	-	36.463
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	36.463	-	-	-	-	-	-	-	-	-	-	36.463
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for procurement of Scalable ECDIS-N systems for surface and amphibious platforms. All installations completed in FY14.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6 **P-1 Line Item Number / Title:** 0670 / Other Navigation Equipment **Modification Number / Title:** 2 / GW050: SCALABLE ECDIS-N

Models of Systems Affected: GW050 SCALABLE ECDIS-N **Modification Type:** SCALABLE ECDIS-N **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> GW050: SCALABLE ECDIS-N												
B Kits												
Recurring												
1.1.1) AMPHIB SCALABLE ECDIS-N - NonOrganic	59 / 15.930	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 15.930
1.1.2) TRAINING EQUIPMENT - NonOrganic	5 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.500
<i>Subtotal: Recurring</i>	- / 17.430	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.430
<i>Subtotal: GW050: SCALABLE ECDIS-N</i>	64 / 17.430	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	64 / 17.430
<i>Subtotal: Procurement, All Modification Items</i>	- / 17.430	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.430
Installation												
<i>Modification Item 1 of 1:</i> GW050: SCALABLE ECDIS-N	- / 19.033	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.033
<i>Subtotal: Installation</i>	- / 19.033	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.033
Total												
Total Cost (Procurement + Support + Installation)	36.463	-	-	-	-	-	-	-	-	-	-	36.463

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 2 / GW050: SCALABLE ECDIS-N

Modification Item 1 of 1: GW050: SCALABLE ECDIS-N

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN SYSTEMS CORP.	Manufacturer Location: CHARLOTTESVILLE, VA
Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 6

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	59 / 18.994	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	59 / 18.994
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	59 / 18.994	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 18.994

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59
Out	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59

Method of Implementation: [none specified]:: Installation Name: TRAINING EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	5 / 0.039	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	5 / 0.039
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 2 / GW050: SCALABLE ECDIS-N

Modification Item 1 of 1: GW050: SCALABLE ECDIS-N

Installation Information

Method of Implementation: [none specified]:: Installation Name: TRAINING EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 0.039	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.039

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Out	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6				P-1 Line Item Number / Title: 0670 / Other Navigation Equipment				Modification Number / Title: 3 / GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	45.233	67.841	68.473	-	181.547
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	45.233	67.841	68.473	-	181.547
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	45.233	67.841	68.473	-	181.547
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for modernization of Inertial Navigation Systems (INS) to address obsolescence and provide improved performance in support of Ballistic Missile Defense (BMD) and amphibious platforms. Current INS-R development schedule is targeting production procurement and installation beginning in FY19.

Installation Cost tables are shown separately in this P-3A for Amphibious and Surface platforms due to different installation plans and costs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6					P-1 Line Item Number / Title: 0670 / Other Navigation Equipment					Modification Number / Title: 3 / GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION			
Models of Systems Affected: GW053 INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION					Modification Type: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION					Related RDT&E PEs: 0204228N			
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION</i>													
B Kits													
Recurring													
1.1.1) AMPHIB INS MODERNIZATION - NonOrganic ⁽³⁾	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 22.122	7 / 26.326	- / -	13 / 48.448	
1.1.2) SURFACE INS MODERNIZATION - NonOrganic ⁽⁴⁾	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 36.918	18 / 34.257	16 / 31.072	- / -	51 / 102.247	
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 36.918</i>	<i>- / 56.379</i>	<i>- / 57.398</i>	<i>- / -</i>	<i>- / 150.695</i>	
<i>Subtotal: GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>17 / 36.918</i>	<i>24 / 56.379</i>	<i>23 / 57.398</i>	<i>- / -</i>	<i>64 / 150.695</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 36.918</i>	<i>- / 56.379</i>	<i>- / 57.398</i>	<i>- / -</i>	<i>- / 150.695</i>	
Installation													
<i>Modification Item 1 of 1: GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 8.315</i>	<i>- / 11.462</i>	<i>- / 11.075</i>	<i>- / -</i>	<i>- / 30.852</i>	
<i>Subtotal: Installation</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 8.315</i>	<i>- / 11.462</i>	<i>- / 11.075</i>	<i>- / -</i>	<i>- / 30.852</i>	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	-	45.233	67.841	68.473	-	181.547	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 3 / GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION

Modification Item 1 of 1: GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION

Manufacturer Information

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

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates					Dec 2018	Dec 2019	Dec 2020
Delivery Dates					Jun 2019	Jun 2020	Jun 2021

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB INS MODERNIZATION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.700	- / -	- / -	6 / 2.700
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 3.213	- / -	7 / 3.213
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.700	7 / 3.213	- / -	13 / 5.913

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	7	-	13
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	7	-	13

Method of Implementation: AIT:: Installation Name: SURFACE INS MODERNIZATION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 3 / GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION

Modification Item 1 of 1: GW053: INERTIAL NAVIGATION SYSTEM (INS) MODERNIZATION

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE INS MODERNIZATION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 8.315	- / -	- / -	- / -	17 / 8.315
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 8.762	- / -	- / -	18 / 8.762
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 7.862	- / -	16 / 7.862
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 8.315	18 / 8.762	16 / 7.862	- / -	51 / 24.939

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	18	-	-	-	16	-	51
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	18	-	-	-	16	-	51

Footnotes:

(3) GW053: Funding provides for procurement and installation of 13 systems, LHD (6) and LPD (7).

(4) GW053: Funding provides for procurement and installation of 51 additional systems on DDG.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6				P-1 Line Item Number / Title: 0670 / Other Navigation Equipment				Modification Number / Title: 4 / GW055: AN/WSN-9 SPEED LOG PROCUREMENT				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	1.900	2.039	8.988	7.313	-	7.313	3.300	3.043	0.604	-	-	27.187
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	1.900	2.039	8.988	7.313	-	7.313	3.300	3.043	0.604	-	-	27.187
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	1.900	2.039	8.988	7.313	-	7.313	3.300	3.043	0.604	-	-	27.187
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are for the procurement of AN/WSN-9 Speed Log upgrades on amphibious, surface and carrier platforms.

Installation Cost tables are shown separately in this P-3A for amphibious, surface and carrier platforms due to different installation plans and costs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 4 / GW055: AN/WSN-9 SPEED LOG PROCUREMENT

Models of Systems Affected: GW055 AN/WSN-9 SPEED LOG PROCUREMENT	Modification Type: AN/WSN-9 SPEED LOG PROCUREMENT	Related RDT&E PEs:
---	--	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> GW055: AN/WSN-9 SPEED LOG PROCUREMENT												
B Kits												
Recurring												
1.1.1) AMPHIB AN/WSN-9 - NonOrganic ⁽⁵⁾	4 / 1.675	2 / 1.120	13 / 4.665	2 / 0.280	- / -	2 / 0.280	- / -	- / -	- / -	- / -	- / -	21 / 7.740
1.1.2) SURFACE AN/WSN-9 - NonOrganic ⁽⁶⁾	- / -	- / -	15 / 3.510	12 / 2.470	- / -	12 / 2.470	11 / 2.020	11 / 2.020	- / -	- / -	- / -	49 / 10.020
1.1.3) CARRIER AN/WSN-9 - NonOrganic ⁽⁷⁾	- / -	- / -	- / -	2 / 0.388	- / -	2 / 0.388	- / -	- / -	- / -	- / -	- / -	2 / 0.388
<i>Subtotal: Recurring</i>	- / 1.675	- / 1.120	- / 8.175	- / 3.138	- / -	- / 3.138	- / 2.020	- / 2.020	- / -	- / -	- / -	- / 18.148
<i>Subtotal: GW055: AN/WSN-9 SPEED LOG PROCUREMENT</i>	4 / 1.675	2 / 1.120	28 / 8.175	16 / 3.138	- / -	16 / 3.138	11 / 2.020	11 / 2.020	- / -	- / -	- / -	72 / 18.148
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.675	- / 1.120	- / 8.175	- / 3.138	- / -	- / 3.138	- / 2.020	- / 2.020	- / -	- / -	- / -	- / 18.148
Installation												
<i>Modification Item 1 of 1:</i> GW055: AN/WSN-9 SPEED LOG PROCUREMENT	- / 0.225	- / 0.919	- / 0.813	- / 4.175	- / -	- / 4.175	- / 1.280	- / 1.023	- / 0.604	- / -	- / -	- / 9.039
<i>Subtotal: Installation</i>	- / 0.225	- / 0.919	- / 0.813	- / 4.175	- / -	- / 4.175	- / 1.280	- / 1.023	- / 0.604	- / -	- / -	- / 9.039
Total												
Total Cost (Procurement + Support + Installation)	1.900	2.039	8.988	7.313	-	7.313	3.300	3.043	0.604	-	-	27.187

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 4 / GW055: AN/WSN-9 SPEED LOG PROCUREMENT

Modification Item 1 of 1: GW055: AN/WSN-9 SPEED LOG PROCUREMENT

Manufacturer Information

Manufacturer Name: WR Systems	Manufacturer Location: Norfolk, VA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 5

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Dec 2014	Dec 2015	Dec 2016	Dec 2017	Dec 2018		
Delivery Dates	May 2015	May 2016	May 2017	May 2018	May 2019		

Installation Information

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.225	3 / 0.687	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	4 / 0.912
FY 2015	- / -	1 / 0.232	1 / 0.219	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.451
FY 2016	- / -	- / -	3 / 0.150	10 / 2.272	- / -	10 / 2.272	- / -	- / -	- / -	- / -	- / -	13 / 2.422
FY 2017	- / -	- / -	- / -	2 / 0.100	- / -	2 / 0.100	- / -	- / -	- / -	- / -	- / -	2 / 0.100
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.225	4 / 0.919	4 / 0.369	12 / 2.372	- / -	12 / 2.372	- / -	- / -	- / -	- / -	- / -	21 / 3.885

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	3	-	-	1	1	-	-	3	5	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	3	-	-	1	1	-	-	3	5	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 4 / GW055: AN/WSN-9 SPEED LOG PROCUREMENT

Modification Item 1 of 1: GW055: AN/WSN-9 SPEED LOG PROCUREMENT

Installation Information

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	9 / 0.444	6 / 1.273	- / -	6 / 1.273	- / -	- / -	- / -	- / -	- / -	15 / 1.717
FY 2017	- / -	- / -	- / -	8 / 0.400	- / -	8 / 0.400	4 / 0.880	- / -	- / -	- / -	- / -	12 / 1.280
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.400	3 / 0.623	- / -	- / -	- / -	11 / 1.023
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.400	3 / 0.604	- / -	- / -	11 / 1.004
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	9 / 0.444	14 / 1.673	- / -	14 / 1.673	12 / 1.280	11 / 1.023	3 / 0.604	- / -	- / -	49 / 5.024

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	9	3	3	-	8	1	3	-	8	-	3	-	8	-	3	-	-	-	-	-	-	-	49
Out	-	-	-	-	-	-	-	9	3	3	-	8	1	3	-	8	-	3	-	8	-	3	-	-	-	-	-	-	-	49

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	2 / 0.130	- / -	2 / 0.130	- / -	- / -	- / -	- / -	- / -	2 / 0.130
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	2 / 0.130	- / -	2 / 0.130	- / -	- / -	- / -	- / -	- / -	2 / 0.130

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 4 / GW055: AN/WSN-9 SPEED LOG PROCUREMENT

Modification Item 1 of 1: GW055: AN/WSN-9 SPEED LOG PROCUREMENT

Installation Information

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

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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

Footnotes:

(5) GW055: Funding provides for procurement and installation of 21 systems, LSD (10) LHD (6) and LPD (5). LPD configuration is less complex than the LHD, therefore, unit costs are less and systems can be installed in the same year as procurement. FY2015 procures 2 LSD full replacement systems with a \$0.560M unit cost; FY2016 procures 4 LSD full replacement systems with a \$0.611M unit cost, 6 LHD full replacement systems with a \$0.300M unit cost, and 3 LPD DHYSL Upgrades with a \$0.140M unit cost; FY2017 procures 2 LPD DHYSL Upgrades with a \$0.140M unit cost. FY17 installation funding (\$1.363M) is for AIT installation on LHD (qty 6) procured in FY16; (\$0.909M) is for AIT installation on LSD (qty 4) procured in FY16; and (\$0.100M) is for AIT installation on LPD (qty 2) procured in FY17.

(6) GW055: Funding provides for procurement and installation of 49 systems, CG (4), DDG (33), and MCM (12). CG configuration consists of additional hardware than other surface configurations; therefore, unit costs are higher. MCM complexity is between CG and DDG; therefore, unit costs are greater than DDG, but less than CG. FY2016 procures 9 DDG DHYSL Upgrades with a unit cost of \$0.140M, 3 CG full replacement systems with a unit cost of \$0.450M, and 3 MCM replacement systems with a unit cost of \$0.300M; FY2017 procures 8 DDG DHYSL Upgrades with a unit cost of \$0.140M, 1 CG full replacement system with a unit cost of \$0.450M, and 3 MCM full replacement systems with a unit cost of \$0.300M. Installation costs for CG and MCM are the same. Installation costs for DDG are lower than CG and MCM and can be installed in the same year as procurement. FY17 installation funding (\$0.636M) is for AIT installation on CG (qty 3) procured in FY16; (\$0.637M) is for AIT installation on MCM (qty 3) procured in FY16; (\$0.400M) is for AIT installation on DDG (qty 8) procured in FY17.

(7) GW055: Funding provides for procurement and installation of 2 systems for carriers. FY2017 procures 2 CVN full replacement systems with a unit cost of \$0.194M. FY17 installation funding (\$0.130M) is for both DSA and AIT CVN installation of systems procured in FY17 (qty 2).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 5 / GW058: NAVSSI CAPSTONE
---	---	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	1.613	1.314	-	1.314	3.010	1.702	1.387	-	-	9.026
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	1.613	1.314	-	1.314	3.010	1.702	1.387	-	-	9.026
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	1.613	1.314	-	1.314	3.010	1.702	1.387	-	-	9.026
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for the procurement, installation, and NRE/ILS/Support of NAVSSI Capstone upgrades on LHD platforms to support Ship Self Defense System (SSDS) upgrades.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6				P-1 Line Item Number / Title: 0670 / Other Navigation Equipment						Modification Number / Title: 5 / GW058: NAVSSI CAPSTONE			
Models of Systems Affected: GW058: NAVSSI CAPSTONE				Modification Type: NAVSSI CAPSTONE				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: GW058: NAVSSI CAPSTONE</i>													
B Kits													
Recurring													
1.1) AMPHIB NAVSSI CAPSTONE - NonOrganic ⁽⁸⁾	- / -	- / -	1 / 1.398	- / -	- / -	- / -	1 / 1.449	1 / 1.475	- / -	- / -	- / -	3 / 4.322	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 1.398	- / -	- / -	- / -	- / 1.449	- / 1.475	- / -	- / -	- / -	- / 4.322	
<i>Subtotal: GW058: NAVSSI CAPSTONE</i>	- / -	- / -	1 / 1.398	- / -	- / -	- / -	1 / 1.449	1 / 1.475	- / -	- / -	- / -	3 / 4.322	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 1.398	- / -	- / -	- / -	- / 1.449	- / 1.475	- / -	- / -	- / -	- / 4.322	
Installation													
<i>Modification Item 1 of 1: GW058: NAVSSI CAPSTONE</i>													
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 0.215	- / 1.314	- / -	- / 1.314	- / 1.561	- / 0.227	- / 1.387	- / -	- / -	- / 4.704	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	1.613	1.314	-	1.314	3.010	1.702	1.387	-	-	9.026	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 5 / GW058: NAVSSI CAPSTONE

Modification Item 1 of 1: GW058: NAVSSI CAPSTONE

Manufacturer Information

Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 8			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Dec 2015		Dec 2017	Dec 2018		
Delivery Dates		Aug 2016		Aug 2018	Aug 2019		

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB NAVSSI CAPSTONE

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / 0.215	1 / 1.314	- / -	1 / 1.314	- / -	- / -	- / -	- / -	- / -	1 / 1.529
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.561	- / -	- / -	- / -	- / -	1 / 1.561
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.227	1 / 1.387	- / -	- / -	1 / 1.614
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / 0.215	1 / 1.314	- / -	1 / 1.314	1 / 1.561	- / 0.227	1 / 1.387	- / -	- / -	3 / 4.704

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

(8) GW058: Funding provides for procurement and installation of 3 upgrades on LHD. FY17 installation funding (\$0.088M) is for DSA activities to support FY18 AIT installations and (\$1.226M) for AIT installation on LHD (qty 1) procured in FY16.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6				P-1 Line Item Number / Title: 0670 / Other Navigation Equipment				Modification Number / Title: 6 / GW059: EMERGENCY NAVIGATION LAPTOP				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	5.654	2.983	-	2.983	0.858	0.176	-	0.164	-	9.835
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	5.654	2.983	-	2.983	0.858	0.176	-	0.164	-	9.835
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	5.654	2.983	-	2.983	0.858	0.176	-	0.164	-	9.835
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for the procurement, installation, and NRE/ILS/support of Emergency Navigation Laptops (ENL) on amphibious, surface and carrier platforms.

Installation Cost tables are shown separately in this P-3A for amphibious, surface and carrier platforms due to different installation plans and costs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 6 / GW059: EMERGENCY NAVIGATION LAPTOP

Models of Systems Affected: GW059: EMERGENCY NAVIGATION LAPTOP	Modification Type: EMERGENCY NAVIGATION LAPTOP	Related RDT&E PEs:
---	---	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: GW059: EMERGENCY NAVIGATION LAPTOP												
B Kits												
Recurring												
1.1) AMPHIB EMERGENCY NAVIGATION LAPTOP - NonOrganic ⁽⁹⁾	- / -	- / -	20 / 0.993	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.993
1.2) SURFACE EMERGENCY NAVIGATION LAPTOP - NonOrganic ⁽¹⁰⁾	- / -	- / -	88 / 3.955	19 / 0.875	- / -	19 / 0.875	12 / 0.584	- / -	- / -	2 / 0.104	- / -	121 / 5.518
1.3) CARRIER EMERGENCY NAVIGATION LAPTOP - NonOrganic ⁽¹¹⁾	- / -	- / -	- / -	9 / 0.415	- / -	9 / 0.415	- / -	- / -	- / -	- / -	- / -	9 / 0.415
Subtotal: Recurring	- / 0.000	- / -	- / 4.948	- / 1.290	- / -	- / 1.290	- / 0.584	- / -	- / -	- / 0.104	- / -	- / 6.926
Subtotal: GW059: EMERGENCY NAVIGATION LAPTOP	- / -	- / -	108 / 4.948	28 / 1.290	- / -	28 / 1.290	12 / 0.584	- / -	- / -	2 / 0.104	- / -	150 / 6.926
Subtotal: Procurement, All Modification Items	- / 0.000	- / -	- / 4.948	- / 1.290	- / -	- / 1.290	- / 0.584	- / -	- / -	- / 0.104	- / -	- / 6.926

Installation

Modification Item 1 of 1: GW059: EMERGENCY NAVIGATION LAPTOP	- / 0.000	- / -	- / 0.706	- / 1.693	- / -	- / 1.693	- / 0.274	- / 0.176	- / -	- / 0.060	- / -	- / 2.909
Subtotal: Installation	- / 0.000	- / -	- / 0.706	- / 1.693	- / -	- / 1.693	- / 0.274	- / 0.176	- / -	- / 0.060	- / -	- / 2.909

Total

Total Cost (Procurement + Support + Installation)	0.000	-	5.654	2.983	-	2.983	0.858	0.176	-	0.164	-	9.835
--	--------------	----------	--------------	--------------	----------	--------------	--------------	--------------	----------	--------------	----------	--------------

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 6 / GW059: EMERGENCY NAVIGATION LAPTOP

Modification Item 1 of 1: GW059: EMERGENCY NAVIGATION LAPTOP

Manufacturer Information

Manufacturer Name: Multiple Vendors	Manufacturer Location: Various
Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 6

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Jan 2016	Jan 2017	Jan 2018			Jan 2021
Delivery Dates		Jul 2016	Jul 2017	Jul 2018			Jul 2021

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB EMERGENCY NAVIGATION LAPTOP

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / 0.106	20 / 0.319	- / -	20 / 0.319	- / -	- / -	- / -	- / -	- / -	20 / 0.425
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / 0.106	20 / 0.319	- / -	20 / 0.319	- / -	- / -	- / -	- / -	- / -	20 / 0.425

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	-	-	5	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
Out	-	-	-	-	-	-	-	-	-	5	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20

Method of Implementation: AIT:: Installation Name: SURFACE EMERGENCY NAVIGATION LAPTOP

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 6 / GW059: EMERGENCY NAVIGATION LAPTOP

Modification Item 1 of 1: GW059: EMERGENCY NAVIGATION LAPTOP

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE EMERGENCY NAVIGATION LAPTOP

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / 0.600	88 / 1.246	- / -	88 / 1.246	- / -	- / -	- / -	- / -	- / -	88 / 1.846
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.274	- / -	- / -	- / -	- / -	19 / 0.274
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.176	- / -	- / -	- / -	12 / 0.176
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.060	2 / 0.060
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / 0.600	88 / 1.246	- / -	88 / 1.246	19 / 0.274	12 / 0.176	- / -	2 / 0.060	- / -	121 / 2.356

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	22	22	22	22	4	5	5	5	3	3	3	3	-	-	-	-	-	-	-	-	2	-	121
Out	-	-	-	-	-	-	-	-	22	22	22	22	4	5	5	5	3	3	3	3	-	-	-	-	-	-	-	-	2	-	121

Method of Implementation: AIT:: Installation Name: CARRIER EMERGENCY NAVIGATION LAPTOP

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	9 / 0.128	- / -	9 / 0.128	- / -	- / -	- / -	- / -	- / -	9 / 0.128
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	9 / 0.128	- / -	9 / 0.128	- / -	- / -	- / -	- / -	- / -	9 / 0.128

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 6 / GW059: EMERGENCY NAVIGATION LAPTOP

Modification Item 1 of 1: GW059: EMERGENCY NAVIGATION LAPTOP

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER EMERGENCY NAVIGATION LAPTOP

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
In	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Out	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9

Footnotes:

⁽⁹⁾ GW059: Funding provides for procurement and installation of 20 systems, LHA (2), LHD (8), and LPD (10). FY17 installation funding (\$0.031M) is for AIT installation on LHA (qty 2) procured in FY16; (\$0.128M) is for AIT installation on LHD (qty 8) procured in FY16; (\$0.160M) is for AIT installation on LPD (qty 10) procured in FY16.

⁽¹⁰⁾ GW059: Funding provides for procurement and installation of 121 systems for surface platforms, CG (14), DDG (65), LCS (16), MCM (12), LCC (1) and PC (13). FY17 installation funding (\$0.185M) is for AIT installation on PC (qty 13) procured in FY16; (\$0.156M) is for AIT installation on CG (qty 11) procured in FY16; (\$0.905M) is for AIT installation on DDG (qty 64) procured in FY16.

⁽¹¹⁾ GW059: Funding provides for procurement and installation of 9 systems for carriers. FY17 installation funding (\$0.128M) is for both DSA and AIT installation of systems procured in FY17 (qty 9).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6				P-1 Line Item Number / Title: 0670 / Other Navigation Equipment				Modification Number / Title: 7 / GW060: NEXT GENERATION FATHOMETER				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	5.333	8.481	-	8.481	-	-	-	-	-	13.814
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	5.333	8.481	-	8.481	-	-	-	-	-	13.814
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	5.333	8.481	-	8.481	-	-	-	-	-	13.814
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for the procurement, installation, and NRE/ILS/support of Next Generation Fathometers to replace legacy AN/UQN-4/4A systems on amphibious, surface and carrier platforms.

Installation Cost tables are shown separately in this P-3A for amphibious, surface and carrier platforms due to different installation plans and costs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6					P-1 Line Item Number / Title: 0670 / Other Navigation Equipment					Modification Number / Title: 7 / GW060: NEXT GENERATION FATHOMETER			
Models of Systems Affected: GW060: NEXT GENERATION FATHOMETER				Modification Type: NEXT GENERATION FATHOMETER				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> GW060: NEXT GENERATION FATHOMETER													
B Kits													
Recurring													
1.1) AMPHIB NEXT GENERATION FATHOMETER - NonOrganic ⁽¹²⁾	- / -	- / -	11 / 1.329	16 / 1.989	- / -	16 / 1.989	- / -	- / -	- / -	- / -	- / -	27 / 3.318	
1.2) SURFACE NEXT GENERATION FATHOMETER - NonOrganic ⁽¹³⁾	- / -	- / -	20 / 2.414	26 / 3.232	- / -	26 / 3.232	- / -	- / -	- / -	- / -	- / -	46 / 5.646	
1.3) CARRIER NEXT GENERATION FATHOMETER - NonOrganic ⁽¹⁴⁾	- / -	- / -	- / -	5 / 0.702	- / -	5 / 0.702	- / -	- / -	- / -	- / -	- / -	5 / 0.702	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 3.743	- / 5.923	- / -	- / 5.923	- / -	- / -	- / -	- / -	- / -	- / 9.666	
<i>Subtotal: GW060: NEXT GENERATION FATHOMETER</i>	- / -	- / -	31 / 3.743	47 / 5.923	- / -	47 / 5.923	- / -	- / -	- / -	- / -	- / -	78 / 9.666	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 3.743	- / 5.923	- / -	- / 5.923	- / -	- / -	- / -	- / -	- / -	- / 9.666	
Installation													
<i>Modification Item 1 of 1:</i> GW060: NEXT GENERATION FATHOMETER	- / 0.000	- / -	- / 1.590	- / 2.558	- / -	- / 2.558	- / -	- / -	- / -	- / -	- / -	- / 4.148	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 1.590	- / 2.558	- / -	- / 2.558	- / -	- / -	- / -	- / -	- / -	- / 4.148	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	5.333	8.481	-	8.481	-	-	-	-	-	13.814	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 7 / GW060: NEXT GENERATION FATHOMETER

Modification Item 1 of 1: GW060: NEXT GENERATION FATHOMETER

Manufacturer Information

Manufacturer Name: Knudsen	Manufacturer Location: Not Specified..
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 3

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Dec 2015	Dec 2016				
Delivery Dates		Mar 2016	Mar 2017				

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB NEXT GENERATION FATHOMETER

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	11 / 0.569	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.569
FY 2017	- / -	- / -	- / -	16 / 0.853	- / -	16 / 0.853	- / -	- / -	- / -	- / -	- / -	16 / 0.853
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	11 / 0.569	16 / 0.853	- / -	16 / 0.853	- / -	- / -	- / -	- / -	- / -	27 / 1.422

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	5	6	-	-	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27
Out	-	-	-	-	-	-	-	5	6	-	-	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27

Method of Implementation: AIT:: Installation Name: SURFACE NEXT GENERATION FATHOMETER

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 7 / GW060: NEXT GENERATION FATHOMETER

Modification Item 1 of 1: GW060: NEXT GENERATION FATHOMETER

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE NEXT GENERATION FATHOMETER

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	20 / 1.021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 1.021
FY 2017	- / -	- / -	- / -	26 / 1.385	- / -	26 / 1.385	- / -	- / -	- / -	- / -	- / -	26 / 1.385
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	20 / 1.021	26 / 1.385	- / -	26 / 1.385	- / -	- / -	- / -	- / -	- / -	46 / 2.406

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	10	10	-	-	13	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46
Out	-	-	-	-	-	-	10	10	-	-	13	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46

Method of Implementation: AIT:: Installation Name: CARRIER NEXT GENERATION FATHOMETER

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	5 / 0.320	- / -	5 / 0.320	- / -	- / -	- / -	- / -	- / -	5 / 0.320
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	5 / 0.320	- / -	5 / 0.320	- / -	- / -	- / -	- / -	- / -	5 / 0.320

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 7 / GW060: NEXT GENERATION FATHOMETER

Modification Item 1 of 1: GW060: NEXT GENERATION FATHOMETER

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER NEXT GENERATION FATHOMETER

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Out	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5

Footnotes:

- (12) GW060: Funding provides for procurement and installation of 27 systems, LHD (7), LPD (10), and LSD (10). FY17 installation funding (\$0.213M) is for AIT installation on LHD (qty 4) procured in FY17; (\$0.320M) is for AIT installation on LPD (qty 6) procured in FY17; (\$0.320M) is for AIT installation on LSD (qty 6) procured in FY17.
- (13) GW060: Funding provides for procurement and installation of 46 systems, CG (9), LCC (2), and DDG (35). FY17 installation funding (\$0.426M) is for AIT installation on CG (qty 8) procured in FY17; (\$0.852M) is for AIT installation on DDG (qty 16) procured in FY17; (\$0.107M) is for AIT installation on LCC (qty 2) procured in FY17.
- (14) GW060: Funding provides for procurement and installation of 5 systems on carriers. FY17 installation funding (\$0.320M) is for AIT installation on CVN (qty 5) procured in FY17.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 8 / GW061: MK 27 REPLACEMENT
---	---	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	2.088	2.094	-	2.094	-	-	-	0.430	-	4.612
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	2.088	2.094	-	2.094	-	-	-	0.430	-	4.612
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	2.088	2.094	-	2.094	-	-	-	0.430	-	4.612

(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:

These funds are required for the procurement, installation, and NRE/ILS/support of replacement for legacy MK27 Backup Heading References on amphibious and surface platforms.

Installation Cost tables are shown separately in this P-3A for Amphibious and Surface platforms due to different installation plans and costs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6					P-1 Line Item Number / Title: 0670 / Other Navigation Equipment					Modification Number / Title: 8 / GW061: MK 27 REPLACEMENT			
Models of Systems Affected: GW061: MK 27 REPLACEMENT				Modification Type: MK 27 REPLACEMENT				Related RDT&E PEs: 0204228N					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> GW061: MK 27 REPLACEMENT													
B Kits													
Recurring													
1.1) AMPHIB MK 27 REPLACEMENT - NonOrganic ⁽¹⁵⁾	- / -	- / -	5 / 0.619	5 / 0.619	- / -	5 / 0.619	- / -	- / -	- / -	2 / 0.268	- / -	12 / 1.506	
1.2) SURFACE MK 27 REPLACEMENT - NonOrganic ⁽¹⁶⁾	- / -	- / -	6 / 0.650	6 / 0.650	- / -	6 / 0.650	- / -	- / -	- / -	- / -	- / -	12 / 1.300	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 1.269	- / 1.269	- / -	- / 1.269	- / -	- / -	- / -	- / 0.268	- / -	- / 2.806	
<i>Subtotal: GW061: MK 27 REPLACEMENT</i>	- / -	- / -	11 / 1.269	11 / 1.269	- / -	11 / 1.269	- / -	- / -	- / -	2 / 0.268	- / -	24 / 2.806	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 1.269	- / 1.269	- / -	- / 1.269	- / -	- / -	- / -	- / 0.268	- / -	- / 2.806	
Installation													
<i>Modification Item 1 of 1:</i> GW061: MK 27 REPLACEMENT													
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 0.819	- / 0.825	- / -	- / 0.825	- / -	- / -	- / -	- / 0.162	- / -	- / 1.806	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	2.088	2.094	-	2.094	-	-	-	0.430	-	4.612	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 8 / GW061: MK 27 REPLACEMENT

Modification Item 1 of 1: GW061: MK 27 REPLACEMENT

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 3

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Dec 2015	Dec 2016				Dec 2020
Delivery Dates		Mar 2016	Mar 2017				Mar 2021

Installation Information

Method of Implementation: AIT:: Installation Name: AMPHIB MK 27 REPLACEMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	5 / 0.375	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.375
FY 2017	- / -	- / -	- / -	5 / 0.375	- / -	5 / 0.375	- / -	- / -	- / -	- / -	- / -	5 / 0.375
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.162	- / -	2 / 0.162
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	5 / 0.375	5 / 0.375	- / -	5 / 0.375	- / -	- / -	- / -	2 / 0.162	- / -	12 / 0.912

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	3	2	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	12
Out	-	-	-	-	-	-	-	3	2	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	12

Method of Implementation: AIT:: Installation Name: SURFACE MK 27 REPLACEMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 8 / GW061: MK 27 REPLACEMENT

Modification Item 1 of 1: GW061: MK 27 REPLACEMENT

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE MK 27 REPLACEMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2016	- / -	- / -	6 / 0.444	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.444
FY 2017	- / -	- / -	- / -	6 / 0.450	- / -	6 / 0.450	- / -	- / -	- / -	- / -	- / -	6 / 0.450
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	6 / 0.444	6 / 0.450	- / -	6 / 0.450	- / -	- / -	- / -	- / -	- / -	12 / 0.894

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	3	3	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	-	-	-	-	-	-	3	3	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Footnotes:

(15) GW061: Funding provides for procurement and installation of 12 systems on LSD. Installation funding is for both DSA and AIT installation of systems procured in the same year. The installation cost associated with GW061 is a combination of DSA (\$19K/install) and AIT Installation (\$56K/install).

(16) GW061: Funding provides for procurement and installation of 12 systems on PC. Installation funding is for both DSA and AIT installation of systems procured in the same year. The installation cost associated with GW061 is a combination of DSA (\$19K/install) and AIT Installation (\$56K/install).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6				P-1 Line Item Number / Title: 0670 / Other Navigation Equipment				Modification Number / Title: 9 / GW062: AN/WSN-7 CDU TECH REFRESH				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	2.273	0.360	-	0.360	0.630	2.640	2.079	2.809	-	10.791
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	2.273	0.360	-	0.360	0.630	2.640	2.079	2.809	-	10.791
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	2.273	0.360	-	0.360	0.630	2.640	2.079	2.809	-	10.791
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

These funds are required for the procurement, installation, and NRE/ILS/support of replacement for legacy AN/WSN-7 Control Display Units on amphibious, surface and carrier platforms.

Installation Cost tables are shown separately in this P-3A for amphibious, surface and carrier platforms due to different installation plans and costs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 9 / GW062: AN/WSN-7 CDU TECH REFRESH

Models of Systems Affected: GW062: AN/WSN-7 CDU TECH REFRESH	Modification Type: AN/WSN-7 CDU TECH REFRESH	Related RDT&E PEs:
---	---	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: GW062: AN/WSN-7 CDU TECH REFRESH</i>												
B Kits												
Recurring												
1.1) AMBPHIB AN/WSN-7 CDU TECH REFRESH - NonOrganic ⁽¹⁷⁾	- / -	- / -	5 / 0.405	- / -	- / -	- / -	5 / 0.445	5 / 0.465	- / -	5 / 0.484	- / -	20 / 1.799
1.2) SURFACE AN/WSN-7 CDU TECH REFRESH - NonOrganic ⁽¹⁸⁾	- / -	- / -	15 / 1.215	- / -	- / -	- / -	- / -	15 / 1.395	15 / 1.470	15 / 1.500	- / -	60 / 5.580
1.3) CARRIER AN/WSN-7 CDU TECH REFRESH - NonOrganic ⁽¹⁹⁾	- / -	- / -	- / -	3 / 0.249	- / -	3 / 0.249	- / -	- / -	- / -	- / -	- / -	3 / 0.249
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 1.620	- / 0.249	- / -	- / 0.249	- / 0.445	- / 1.860	- / 1.470	- / 1.984	- / -	- / 7.628
<i>Subtotal: GW062: AN/WSN-7 CDU TECH REFRESH</i>	- / -	- / -	20 / 1.620	3 / 0.249	- / -	3 / 0.249	5 / 0.445	20 / 1.860	15 / 1.470	20 / 1.984	- / -	83 / 7.628
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 1.620	- / 0.249	- / -	- / 0.249	- / 0.445	- / 1.860	- / 1.470	- / 1.984	- / -	- / 7.628
Installation												
<i>Modification Item 1 of 1: GW062: AN/WSN-7 CDU TECH REFRESH</i>	- / 0.000	- / -	- / 0.653	- / 0.111	- / -	- / 0.111	- / 0.185	- / 0.780	- / 0.609	- / 0.825	- / -	- / 3.163
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 0.653	- / 0.111	- / -	- / 0.111	- / 0.185	- / 0.780	- / 0.609	- / 0.825	- / -	- / 3.163
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	2.273	0.360	-	0.360	0.630	2.640	2.079	2.809	-	10.791

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 9 / GW062: AN/WSN-7 CDU TECH REFRESH

Modification Item 1 of 1: GW062: AN/WSN-7 CDU TECH REFRESH

Manufacturer Information

Manufacturer Name: WR Systems	Manufacturer Location: Norfolk, VA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 3

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020
Delivery Dates		Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021

Installation Information

Method of Implementation: AIT:: Installation Name: AMBPHIB AN/WSN-7 CDU TECH REFRESH

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	5 / 0.165	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.165
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.185	- / -	- / -	- / -	- / -	5 / 0.185
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.195	- / -	- / -	- / -	5 / 0.195
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.203	- / -	5 / 0.203
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	5 / 0.165	- / -	- / -	- / -	5 / 0.185	5 / 0.195	- / -	5 / 0.203	- / -	20 / 0.748

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	3	-	-	-	-	-	-	2	3	-	-	2	3	-	-	-	-	-	-	3	2	-	20
Out	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-	2	3	-	-	2	3	-	-	-	-	-	-	3	2	-	20

Method of Implementation: AIT:: Installation Name: SURFACE AN/WSN-7 CDU TECH REFRESH

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 9 / GW062: AN/WSN-7 CDU TECH REFRESH

Modification Item 1 of 1: GW062: AN/WSN-7 CDU TECH REFRESH

Installation Information

Method of Implementation: AIT:: Installation Name: SURFACE AN/WSN-7 CDU TECH REFRESH

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	15 / 0.488	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.488
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.585	- / -	- / -	- / -	15 / 0.585
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.609	- / -	- / -	15 / 0.609
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.622	- / -	15 / 0.622
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	15 / 0.488	- / -	- / -	- / -	- / -	15 / 0.585	15 / 0.609	15 / 0.622	- / -	60 / 2.304

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	7	8	-	-	-	-	-	-	-	-	-	-	7	8	-	-	7	8	-	-	8	7	-	60
Out	-	-	-	-	-	-	7	8	-	-	-	-	-	-	-	-	-	-	7	8	-	-	7	8	-	-	8	7	-	60

Method of Implementation: AIT:: Installation Name: CARRIER AN/WSN-7 CDU TECH REFRESH

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	3 / 0.111	- / -	3 / 0.111	- / -	- / -	- / -	- / -	- / -	3 / 0.111
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	3 / 0.111	- / -	3 / 0.111	- / -	- / -	- / -	- / -	- / -	3 / 0.111

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 6	P-1 Line Item Number / Title: 0670 / Other Navigation Equipment	Modification Number / Title: 9 / GW062: AN/WSN-7 CDU TECH REFRESH

Modification Item 1 of 1: GW062: AN/WSN-7 CDU TECH REFRESH

Installation Information

Method of Implementation: AIT:: Installation Name: CARRIER AN/WSN-7 CDU TECH REFRESH

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Out	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3

Footnotes:

- (17) GW062: Funding provides for procurement and installation of 20 upgrades, LHA (2), LHD (8), and LPD (10). Installation funding is for both DSA and AIT installation of systems procured in the same year. The installation cost associated with GW062 is a combination of DSA (\$8K/install) and AIT Installation (\$25K/install).
- (18) GW062: Funding provides for procurement and installation of 60 upgrades, CG (15), DDG (42), and LCS (3). Installation funding is for both DSA and AIT installation of systems procured in the same year. The installation cost associated with GW062 is a combination of DSA (\$8K/install) and AIT Installation (\$25K/install).
- (19) GW062: Funding provides for procurement and installation of 3 upgrades on carriers. Installation funding is for both DSA and AIT installation of systems procured in the same year. The installation cost associated with GW062 is a combination of DSA (\$9K/install) and AIT Installation (\$28K/install).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 8: Periscopes	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip
--	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	566.257	57.221	63.109	-	-	-	-	-	-	-	-	686.587
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	566.257	57.221	63.109	-	-	-	-	-	-	-	-	686.587
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	566.257	57.221	63.109	-	-	-	-	-	-	-	-	686.587

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	4.791	5.797	-	-	-	-	-	-	-	-	10.588
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Note: Submarine Electromagnetic Systems including Imaging, Electronic Warfare and Radar programs are managed by PMS435. Imaging Budget Line Item 0831 and Electronic Warfare Budget Line Item 2560 (including Radar) OPN funds will consolidate under BLI 0840 in FY17 and out.

The Submarine Periscopes and Imaging Equipment Program procures the Type 18 and Type 8 periscope upgrades; all variants of Photonics Mast (PM), including Low Profile Photonics Mast (LPPM) and 360 degree imaging capability and incorporates it in the Integrated Submarine Imaging System (ISIS), and VIRGINIA Class imaging upgrades and Photonics land based spares. Commander Naval Submarine Force (CNSF), Operations Review Group (ORG) selected the Periscope Acquisition, Tracking, and Ranging with Improved Observation Techniques (PATRIOT) Type 18 Periscope Rangefinder and the Night Owl Type 8 Infra-Red (IR) Periscope as high priority tactical control technologies to field. By OPNAV Ltr Ser. N77/3U629209, 12 June 2003, OPNAV N87 established the ISIS to rapidly field these systems and integrate existing periscope imagery systems into a single system for installation on board submarines. An ISIS capability development document (CDD) was approved 22 Dec, 2011. The CDD is used to fully integrate the ISIS program of record into the submarine force's rapid insertion technology process and to incorporate Fleet-endorsed requirements such as LPPM that are not levied by the ISIS Operational Requirements Documents. ISIS supports high intensity operations in the littorals, providing the submarine force with the tactical imaging systems necessary to safely and effectively employ its surveillance and weapons capabilities. The IR imaging capability improves imaging at night and in low visibility conditions. The PATRIOT Automated Range Finder provides a 360 degree search independent of the visual search, enhanced situational awareness and provides a collision avoidance capability. Tactical Imagery Technology Insertion (TI) includes the common control and displays hardware and software on all platforms regardless of imaging sensors, an integrated imaging system that provides for operator alerts, imaging enhancement tools and contact analysis tools, and a fully Submarine Warfare Federated Tactical Systems (SWFTS) integrated system providing "any display anywhere." Funding improves submarine imaging capability in the areas of: ship safety, Intelligence, Surveillance and Reconnaissance (ISR), tactical control (contact management in the littorals) to provide high quality imaging 24 hours a day, 7 days a week in all weather conditions to support submarine operations worldwide. ISIS provides for the modernization of imaging systems to improve imaging capabilities for the submarine force in support of ISR requirements. This includes the integration of new capabilities, both inboard hardware and software, into the Type 18 and Type 8 Periscopes for LOS ANGELES Class and SEAWOLF Class submarines, the Photonics Mast Variant (PMV) for SSGN, and Photonics Mast upgrades to the VIRGINIA Class AN/BVS-1 including the AN/BVY-1 ISIS capability and LPPM.

PL010 - Imaging ISIS Technical Insertions - Continuing in FY17 funding procures Imaging systems and Technical Insertion kits and spares to upgrade ISIS systems on LOS ANGELES, SEAWOLF, VA and OHIO Class SSGN platforms to allow for Capability Insertion and obsolescence avoidance. FY16 procurement also adds funding for improved copper-fiber optic diploops and hull penetrators required to support advanced Imaging and Early Warning capabilities included in Low Profile Photonics Mast and future 360 degree Imaging masts.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 8: Periscopes		P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>PL011 - Imaging Block Upgrades - FY17 funding continues procurement of Periscopes and Imaging Equipment reliability, capability, and maintainability upgrades, e.g., Eyepiece Box, periscope mechanical hoisting mechanism upgrades, inboard electronic processing hardware and associated Integrated Logistics Support (ILS), Robust Surveillance Program, Certification of regional repair centers for Imaging System maintenance and technical data. Variable quantities and types are bought in each fiscal year.</p> <p>PL012 - Funds procure replacement in support of Special Support Equipment (SSE) for each maintenance level to ensure systems are maintained in a state of operational readiness. Equipment includes Q-Band Test Equipment, Mast Dynamic Collimator, Eyebox/Mast Test Set, and Antenna/Outer Head Simulator required due to obsolescence and age of existing imaging systems SSE.</p> <p>PL015 - Funding is for Interim Contract Support provided by the periscope manufacturer. The majority of the funding is for Type18 service life extension, depot repair and upgrades for all configurations of Photonics Masts. It also funds all levels of repairs for all types of tactical submarine imaging systems.</p> <p>PL016 - Funding is for imaging systems training requirements to include curriculum development, training materials, and initial factory training pilot course conduct, Navy Training Plans, and instructor advisory services.</p> <p>PL022 - Funding is for the procurement of SSN ISIS Imaging Systems. ISIS provides for the modernization of imaging systems to improve imaging capabilities for the submarine force in support of ISR requirements. This includes the integration of the Type 18 PATRIOT Automated Range Finder and Type 8 IR Periscope as well as other new capabilities into the Type 18 and Type 8 Periscopes.</p> <p>PL023 - Funding is for the procurement and support of VIRGINIA Class ISIS Imaging Systems, as well as, Technical Insertions required for sustainment of VIRGINIA Class platforms, including the integration of the Mast Technical Insertions into the Photonics Mast. These systems support submarine force ISR requirements through the modernization of legacy hardware which allows for Capability Insertion, obsolescence avoidance, and improved system reliability.</p> <p>PL025 - Funding is for the procurement, support and technical insertion of VIRGINIA Class LPPM production and land based spare masts and associated components. The spares will be used for replacement Imaging Masts on VIRGINIA Class Submarines. Quantity of spares will increase with VIRGINIA submarine procurements.</p> <p>PL830 - Production Engineering funds provide the following functions: value engineering; review and evaluation of production design data and documentation; production configuration control; maintenance engineering efforts designed and incorporated into the production manufacturing process, and other related engineering functions that are integral to all of the Imaging Systems and ancillary components.</p> <p>PL900 - Imaging Systems engineering, technical and maintenance services funds provide the following functions: In-Service engineering and technical support to deployed Periscope and Imaging Equipment, imaging system installation and integration planning, SHIPALT and TEMPALT technical data preparation, production hardware design review, engineering/technical support for installations, training materials development, field engineering and technical problem resolution, block upgrade installation planning, configuration management, and maintenance planning including inventory, management, repair, and restoration scheduling.</p> <p>PL927 - Funding is for the installation of Fleet Modernization Program Equipment.</p> <p>PL4M7 - Funding is for the installation of non-Fleet Modernization Program Equipment.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 8: Periscopes

P-1 Line Item Number / Title:
0831 / Sub Periscopes & Imaging Equip

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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 PERISCOPES & IMAGING EQUIPMENT			- / 107.191	- / 12.219	- / 14.033	- / -	- / -	- / -
P-3a	1 / PL010 - Imaging ISIS Technical Insertion (ORDALT)			- / 30.623	- / 27.911	- / 43.046	- / -	- / -	- / -
P-3a	2 / PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/ Type 18 (ORDALT)			- / 20.381	- / 0.357	- / 0.363	- / -	- / -	- / -
P-3a	3 / PL011 Imaging Block Upgrades/Technical Insertions Imaging: ISIS (ORDALT)			- / 45.286	- / -	- / -	- / -	- / -	- / -
P-3a	4 / PL022 Integrated Submarine Imaging System (ISIS) Increment I Capability Insertion (SHIPALT)			- / 295.911	- / -	- / -	- / -	- / -	- / -
P-3a	5 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 ISIS (SHIPALT)			- / 54.672	- / -	- / -	- / -	- / -	- / -
P-3a	6 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 MAST Tech Insertion (SHIPALT)			- / 12.193	- / -	- / -	- / -	- / -	- / -
P-3a	7 / PL025 Low Profile Photonics Mast (LPPM) (SHIPALT)			- / 0.000	- / 16.734	- / 5.667	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 566.257	- / 57.221	- / 63.109	- / -	- / -	- / -

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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 PERISCOPES & IMAGING EQUIPMENT			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / PL010 - Imaging ISIS Technical Insertion (ORDALT)			- / -	- / -	- / -	- / -	- / -	- / 101.580
P-3a	2 / PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/ Type 18 (ORDALT)			- / -	- / -	- / -	- / -	- / -	- / 21.101
P-3a	3 / PL011 Imaging Block Upgrades/Technical Insertions Imaging: ISIS (ORDALT)			- / -	- / -	- / -	- / -	- / -	- / 45.286
P-3a	4 / PL022 Integrated Submarine Imaging System (ISIS) Increment I Capability Insertion (SHIPALT)			- / -	- / -	- / -	- / -	- / -	- / 295.911
P-3a	5 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 ISIS (SHIPALT)			- / -	- / -	- / -	- / -	- / -	- / 54.672
P-3a	6 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 MAST Tech Insertion (SHIPALT)			- / -	- / -	- / -	- / -	- / -	- / 12.193
P-3a	7 / PL025 Low Profile Photonics Mast (LPPM) (SHIPALT)			- / -	- / -	- / -	- / -	- / -	- / 22.401
P-40	Total Gross/Weapon System Cost			- / -	- / -	- / -	- / -	- / -	- / 686.587

*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:
Note: Submarine Electromagnetic Systems including Imaging, Electronic Warfare and Radar programs are managed by PMS435. Imaging Budget Line Item 0831 and Electronic Warfare Budget Line Item 2560 (including Radar) OPN funds will consolidate under BLI 0840 in FY17 and out.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Aggregated Items Title: SUBMARINE PERISCOPES & IMAGING EQUIPMENT
---	---	--

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) PL012 PERISCOPE SPECIAL SUPPORT EQUIPMENT																				
1.1) SPECIAL SUPPORT EQUIPMENT	A		-	-	5.383	-	-	0.528	-	-	0.536	-	-	-	-	-	-	-	-	-
Subtotal: 1) PL012 PERISCOPE SPECIAL SUPPORT EQUIPMENT			-	-	5.383	-	-	0.528	-	-	0.536	-	-	-	-	-	-	-	-	-
2) PL015 PERISCOPE INTERIM CONTRACTOR SUPPORT ⁽¹⁾																				
2.1) INTERIM CONTRACTOR SUPPORT	A		-	-	68.690	-	-	7.598	-	-	9.339	-	-	-	-	-	-	-	-	-
Subtotal: 2) PL015 PERISCOPE INTERIM CONTRACTOR SUPPORT			-	-	68.690	-	-	7.598	-	-	9.339	-	-	-	-	-	-	-	-	-
3) PL016 PERISCOPE TRAINING																				
3.1) TRAINING	A		-	-	1.451	-	-	0.176	-	-	0.178	-	-	-	-	-	-	-	-	-
Subtotal: 3) PL016 PERISCOPE TRAINING			-	-	1.451	-	-	0.176	-	-	0.178	-	-	-	-	-	-	-	-	-
4) PL830 PERISCOPE PRODUCTION ENGINEERING																				
4.1) PRODUCTION ENGINEERING	A		-	-	27.235	-	-	3.525	-	-	3.582	-	-	-	-	-	-	-	-	-
Subtotal: 4) PL830 PERISCOPE PRODUCTION ENGINEERING			-	-	27.235	-	-	3.525	-	-	3.582	-	-	-	-	-	-	-	-	-
5) PL900 PERISCOPE CONSULTING SERVICES																				
5.1) CONSULTING SERVICES	A		-	-	4.432	-	-	0.392	-	-	0.398	-	-	-	-	-	-	-	-	-
Subtotal: 5) PL900 PERISCOPE CONSULTING SERVICES			-	-	4.432	-	-	0.392	-	-	0.398	-	-	-	-	-	-	-	-	-
Total			-	-	107.191	-	-	12.219	-	-	14.033	-	-	-	-	-	-	-	-	-

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

Footnotes:

⁽¹⁾ FY16 increase provides support and repairs for new prototype Low Profile Photonics Masts (LPPM).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8				P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip				Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	30.623	27.911	43.046	-	-	-	-	-	-	-	-	101.580
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	30.623	27.911	43.046	-	-	-	-	-	-	-	-	101.580
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	30.623	27.911	43.046	-	-	-	-	-	-	-	-	101.580
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides for the modernization of Imaging systems and TI kits to upgrade Integrated Submarine Imaging System (ISIS) on LOS ANGELES, SEAWOLF, VIRGINIA and OHIO Class SSGN platforms in support of Intelligence, Surveillance and Reconnaissance (ISR) requirements. FY16 \$4.0 million TI increase to VIRGINIA ISIS backfit cost procures two (2) copper fiber diploop and hull penetrator sets required for VIRGINIA Class Submarines receiving ISIS Backfit Upgrades to field LPPM and future masts. Base VIRGINIA ISIS Backfit cost (\$9.991 million) reflects historical VIRGINIA Backfit cost baseline.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8					P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip					Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion			
Models of Systems Affected: ISIS TI				Modification Type: ORDALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: PL010 - Imaging ISIS Technical Insertion</i>													
B Kits													
Recurring													
1.1.1) 688/21 TECHNICAL INSERTION - NonOrganic	2 / 1.932	6 / 5.906	7 / 7.001	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 14.839	
1.1.2) VA ISIS BACKFIT - NonOrganic ⁽²⁾	- / -	- / -	2 / 13.991	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 13.991	
1.1.3) SSBN BACKFIT - NonOrganic	- / -	- / -	2 / 0.380	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.380	
1.1.4) ISIS TI CCM - Organic	1 / 0.966	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.966	
<i>Subtotal: Recurring</i>	<i>- / 2.898</i>	<i>- / 5.906</i>	<i>- / 21.372</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 30.176</i>	
<i>Subtotal: PL010 - Imaging ISIS Technical Insertion</i>	<i>3 / 2.898</i>	<i>6 / 5.906</i>	<i>11 / 21.372</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>20 / 30.176</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 2.898</i>	<i>- / 5.906</i>	<i>- / 21.372</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 30.176</i>	
Support (All Modification Items)													
2.1) ISIS TECHNICAL INSERTION NRE ⁽³⁾	- / 27.725	- / 21.405	- / 19.849	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 68.979	
<i>Subtotal: Support</i>	<i>- / 27.725</i>	<i>- / 21.405</i>	<i>- / 19.849</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 68.979</i>	
Installation													
<i>Modification Item 1 of 1: PL010 - Imaging ISIS Technical Insertion</i>	<i>- / 0.000</i>	<i>- / 0.600</i>	<i>- / 1.825</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 2.425</i>	
<i>Subtotal: Installation</i>	<i>- / 0.000</i>	<i>- / 0.600</i>	<i>- / 1.825</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 2.425</i>	
Total													
Total Cost (Procurement + Support + Installation)	30.623	27.911	43.046	-	-	-	-	-	-	-	-	101.580	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion

Modification Item 1 of 1: PL010 - Imaging ISIS Technical Insertion

Manufacturer Information

Manufacturer Name: LMC	Manufacturer Location: Manassas, VA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2015	Mar 2016					
Delivery Dates	Mar 2016	Mar 2017					

Installation Information

Method of Implementation: AIT:: Installation Name: 688/21 TECHNICAL INSERTION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / 0.600
FY 2015	- / -	- / -	6 / 1.825	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.825
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / 0.600	6 / 1.825	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 2.425

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	1	1	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	
Out	-	-	1	1	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8		

Method of Implementation: AIT:: Installation Name: VA ISIS BACKFIT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion

Modification Item 1 of 1: PL010 - Imaging ISIS Technical Insertion

Installation Information

Method of Implementation: AIT:: Installation Name: VA ISIS BACKFIT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Method of Implementation: AIT:: Installation Name: SSBN BACKFIT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion

Modification Item 1 of 1: PL010 - Imaging ISIS Technical Insertion

Installation Information

Method of Implementation: AIT:: Installation Name: SSBN BACKFIT

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Method of Implementation (Organic): ISIS TI CCM - Not Installed

Installation Quantity: 1

Footnotes:

- (2) Increase of \$4.0 million to fund two (2) copper fiber diploop and hull penetrator sets required for VIRGINIA Class Submarines receiving ISIS Backfit Upgrades to field LPPM and future masts.
- (3) Increased TI/APB NRE reflects funding required for productionization of externally developed Advanced Processor Build (APB) capabilities and ISIS software stability support.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8				P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip				Modification Number / Title: 2 / PL011 Imaging Block Upgrades/ Technical Insertions Imaging: Type 8/ Type 18				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	20.381	0.357	0.363	-	-	-	-	-	-	-	-	21.101
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	20.381	0.357	0.363	-	-	-	-	-	-	-	-	21.101
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	20.381	0.357	0.363	-	-	-	-	-	-	-	-	21.101
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides obsolescence related upgrades for Submarine Periscopes. One (1) set is procured in each fiscal year that includes variable quantities.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy											Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8				P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip							Modification Number / Title: 2 / PL011 Imaging Block Upgrades/ Technical Insertions Imaging: Type 8/ Type 18			
Models of Systems Affected: TYPE 8/TYPE 18				Modification Type: ORDALT				Related RDT&E PEs:						
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total		
	<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>		
Procurement														
<i>Modification Item 1 of 1: PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/Type 18</i>														
B Kits														
Recurring														
1.1.1) TYPE 8/TYPE 18 - NonOrganic	65 / 15.442	1 / 0.243	1 / 0.247	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 15.932		
<i>Subtotal: Recurring</i>	- / 15.442	- / 0.243	- / 0.247	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.932		
<i>Subtotal: PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/Type 18</i>	65 / 15.442	1 / 0.243	1 / 0.247	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 15.932		
<i>Subtotal: Procurement, All Modification Items</i>	- / 15.442	- / 0.243	- / 0.247	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.932		
Installation														
<i>Modification Item 1 of 1: PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/Type 18</i>														
	- / 4.939	- / 0.114	- / 0.116	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.169		
<i>Subtotal: Installation</i>	- / 4.939	- / 0.114	- / 0.116	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.169		
Total														
Total Cost (Procurement + Support + Installation)	20.381	0.357	0.363	-	-	-	-	-	-	-	-	21.101		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 2 / PL011 Imaging Block Upgrades/ Technical Insertions Imaging: Type 8/ Type 18

Modification Item 1 of 1: PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/Type 18

Manufacturer Information

Manufacturer Name: Multiple Vendors	Manufacturer Location: Various
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 14

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2015	Mar 2016					
Delivery Dates	May 2016	May 2017					

Installation Information

Method of Implementation: AIT:: Installation Name: TYPE 8/TYPE 18

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	64 / 4.939	1 / 0.114	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	65 / 5.053
FY 2015	- / -	- / -	1 / 0.116	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.116
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	64 / 4.939	1 / 0.114	1 / 0.116	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	66 / 5.169

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	64	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66
Out	64	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8				P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip				Modification Number / Title: 3 / PL011 Imaging Block Upgrades/ Technical Insertions Imaging: ISIS				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	45.286	-	-	-	-	-	-	-	-	-	-	45.286
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	45.286	-	-	-	-	-	-	-	-	-	-	45.286
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	45.286	-	-	-	-	-	-	-	-	-	-	45.286
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Imaging TI kits upgrade the ISIS on LOS ANGELES, SEAWOLF, and OHIO Class (SSGN) platforms to allow for obsolescence avoidance. FY14 completes TI installations of TI's previously procured under PL011. Procurements were merged into PL010 beginning FY14.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 3 / PL011 Imaging Block Upgrades/ Technical Insertions Imaging: ISIS

Models of Systems Affected: ISIS IMAGING BLOCK UPGRADES/TECHNICAL INSERTIONS	Modification Type: ORDALT	Related RDT&E PEs:
--	----------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> PL011 Imaging Block Upgrades/Technical Insertions Imaging: ISIS												
B Kits												
Recurring												
1.1.1) TECHNICAL INSERTIONS - NonOrganic	17 / 15.937	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 15.937
<i>Subtotal: Recurring</i>	- / 15.937	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.937
<i>Subtotal: PL011 Imaging Block Upgrades/Technical Insertions Imaging: ISIS</i>	17 / 15.937	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 15.937
<i>Subtotal: Procurement, All Modification Items</i>	- / 15.937	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.937
Support (All Modification Items)												
2.1) TECHNICAL INSERTION NRE	- / 23.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 23.136
<i>Subtotal: Support</i>	- / 23.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 23.136
Installation												
<i>Modification Item 1 of 1:</i> PL011 Imaging Block Upgrades/Technical Insertions Imaging: ISIS	- / 6.213	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.213
<i>Subtotal: Installation</i>	- / 6.213	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.213
Total												
Total Cost (Procurement + Support + Installation)	45.286	-	-	-	-	-	-	-	-	-	-	45.286

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 3 / PL011 Imaging Block Upgrades/ Technical Insertions Imaging: ISIS

Modification Item 1 of 1: PL011 Imaging Block Upgrades/Technical Insertions Imaging: ISIS

Manufacturer Information

Manufacturer Name: LMC				Manufacturer Location: Manassas, VA			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 12			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: TECHNICAL INSERTIONS

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 6.213	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	17 / 6.213
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	17 / 6.213	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 6.213

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8				P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip				Modification Number / Title: 4 / PL022 Integrated Submarine Imaging System (ISIS) Increment I Capability Insertion				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	295.911	-	-	-	-	-	-	-	-	-	-	295.911
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	295.911	-	-	-	-	-	-	-	-	-	-	295.911
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	295.911	-	-	-	-	-	-	-	-	-	-	295.911

(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:

Provides for the modernization of submarine imaging systems to improve imaging capabilities in support of ISR requirements. FY14 completes increment I installations of previously procured systems.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 4 / PL022 Integrated Submarine Imaging System (ISIS) Increment I Capability Insertion

Models of Systems Affected: ISIS INCREMENT I	Modification Type: SHIPALT	Related RDT&E PEs:
---	-----------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> PL022 Integrated Submarine Imaging System (ISIS) Increment I Capability Insertion												
B Kits												
Recurring												
1.1.1) ISIS CAPABILITY INSERTION - NonOrganic	47 / 213.024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 213.024
1.1.2) CAPABILITY INSERTION SPARES/CCM - Organic	8 / 27.357	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 27.357
<i>Subtotal: Recurring</i>	- / 240.381	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 240.381
<i>Subtotal: PL022 Integrated Submarine Imaging System (ISIS) Increment I Capability Insertion</i>	55 / 240.381	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	55 / 240.381
<i>Subtotal: Procurement, All Modification Items</i>	- / 240.381	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 240.381
Support (All Modification Items)												
2.1) ISIS CAPABILITY INSERTION NRE	- / 14.339	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.339
<i>Subtotal: Support</i>	- / 14.339	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.339
Installation												
<i>Modification Item 1 of 1:</i> PL022 Integrated Submarine Imaging System (ISIS) Increment I Capability Insertion	- / 41.191	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 41.191
<i>Subtotal: Installation</i>	- / 41.191	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 41.191
Total												
Total Cost (Procurement + Support + Installation)	295.911	-	-	-	-	-	-	-	-	-	-	295.911

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 4 / PL022 Integrated Submarine Imaging System (ISIS) Increment I Capability Insertion

Modification Item 1 of 1: PL022 Integrated Submarine Imaging System (ISIS) Increment I Capability Insertion

Manufacturer Information

Manufacturer Name: Multiple Vendors	Manufacturer Location: Various
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 17

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: ISIS CAPABILITY INSERTION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	47 / 41.191	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	47 / 41.191
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	47 / 41.191	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 41.191

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47
Out	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47

Method of Implementation (Organic): CAPABILITY INSERTION SPARES/CCM - Not Installed **Installation Quantity:** 8

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8				P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip				Modification Number / Title: 5 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 ISIS				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	54.672	-	-	-	-	-	-	-	-	-	-	54.672
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	54.672	-	-	-	-	-	-	-	-	-	-	54.672
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	54.672	-	-	-	-	-	-	-	-	-	-	54.672
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides for the modernization of VA Class submarine imaging systems to install the ISIS capabilities in support of ISR requirements. Activities previously funded under PL023 in FY14 and earlier years are funded under PL010 in FY15 and future years.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8					P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip					Modification Number / Title: 5 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 ISIS				
Models of Systems Affected: VA CLASS ISIS AN/BVS-1				Modification Type: SHIPALT				Related RDT&E PEs:						
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total		
	<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>		
Procurement														
<i>Modification Item 1 of 1: PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 ISIS</i>														
B Kits														
Recurring														
1.1.1) VA CLASS ISIS - NonOrganic	6 / 30.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 30.065		
<i>Subtotal: Recurring</i>	- / 30.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 30.065		
<i>Subtotal: PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 ISIS</i>	6 / 30.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 30.065		
<i>Subtotal: Procurement, All Modification Items</i>	- / 30.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 30.065		
Support (All Modification Items)														
2.1) VA CLASS ISIS TECHNICAL INSERTION NRE	- / 18.760	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.760		
2.2) VA ISIS PRODUCTION SUPPORT	- / 2.928	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.928		
<i>Subtotal: Support</i>	- / 21.688	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 21.688		
Installation														
<i>Modification Item 1 of 1: PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 ISIS</i>	- / 2.919	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.919		
<i>Subtotal: Installation</i>	- / 2.919	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.919		
Total														
Total Cost (Procurement + Support + Installation)	54.672	-	-	-	-	-	-	-	-	-	-	54.672		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 5 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 ISIS

Modification Item 1 of 1: PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 ISIS

Manufacturer Information

Manufacturer Name: LMC	Manufacturer Location: Manassas, VA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: VA CLASS ISIS

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 2.919	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 2.919
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 2.919	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.919

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Out	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8				P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip				Modification Number / Title: 6 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 MAST Tech Insertion				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	12.193	-	-	-	-	-	-	-	-	-	-	12.193
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	12.193	-	-	-	-	-	-	-	-	-	-	12.193
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	12.193	-	-	-	-	-	-	-	-	-	-	12.193
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides obsolescence related upgrades for VA Class submarine imaging systems in support of ISR requirements. Activities previously funded under PL023 in FY14 and earlier years are funded under PL010 in FY15 and future years.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 6 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 MAST Tech Insertion

Models of Systems Affected: VA CLASS AN/BVS-1 MTI	Modification Type: SHIPALT	Related RDT&E PEs:
--	-----------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 MAST Tech Insertion												
B Kits												
Recurring												
1.1.1) VA CLASS MTI - NonOrganic	12 / 7.476	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 7.476
1.1.2) VA CLASS MTI SPARES - Organic	2 / 1.274	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.274
Subtotal: Recurring	- / 8.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.750
Subtotal: PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 MAST Tech Insertion	14 / 8.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 8.750
Subtotal: Procurement, All Modification Items	- / 8.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.750

Support (All Modification Items)

2.1) VA CLASS MIT PRODUCTION SUPPORT	- / 2.929	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.929
Subtotal: Support	- / 2.929	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.929

Installation

Modification Item 1 of 1: PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 MAST Tech Insertion	- / 0.514	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.514
Subtotal: Installation	- / 0.514	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.514

Total

Total Cost (Procurement + Support + Installation)	12.193	-	-	-	-	-	-	-	-	-	-	12.193
--	--------	---	---	---	---	---	---	---	---	---	---	--------

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 6 / PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 MAST Tech Insertion

Modification Item 1 of 1: PL023 VIRGINIA Class Imaging Modernization AN/BVS-1 MAST Tech Insertion

Manufacturer Information

Manufacturer Name: Seacorp	Manufacturer Location: Middletown, RI
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: VA CLASS MTI

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	12 / 0.514	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	12 / 0.514
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	12 / 0.514	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.514

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Method of Implementation (Organic): VA CLASS MTI SPARES - Not Installed **Installation Quantity:** 2

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8				P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip				Modification Number / Title: 7 / PL025 Low Profile Photonics Mast (LPPM)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	16.734	5.667	-	-	-	-	-	-	-	-	22.401
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	16.734	5.667	-	-	-	-	-	-	-	-	22.401
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	16.734	5.667	-	-	-	-	-	-	-	-	22.401
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

VA Class LPPM with high definition color, short wave infrared, and laser range finder capabilities. Procures initial modernization assets as well as spare masts later in FYDP to maintain overall spares ratio for imaging masts as quantity of imaging equipped ships increases. Maintaining sufficient quantities of installed and spare LPPMs is essential to meet PACFLT requirements for all deploying VA class submarines in the Pacific to be equipped with low profile imaging masts. Install funding starting in FY17 and out will be funded with Line Item 0840 due to Line Item 0831 and 2560 transitioning to budget line item 0840 in FY17.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8					P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip					Modification Number / Title: 7 / PL025 Low Profile Photonics Mast (LPPM)			
Models of Systems Affected: Photonics Mast				Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: PL025 Low Profile Photonics Mast (LPPM)</i>													
B Kits													
Recurring													
1.1.1) LPPM - NonOrganic	- / -	2 / 11.156	1 / 5.667	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 16.823	
1.1.2) CCM - Organic	- / -	1 / 5.578	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.578	
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / 16.734</i>	<i>- / 5.667</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 22.401</i>	
<i>Subtotal: PL025 Low Profile Photonics Mast (LPPM)</i>	<i>- / -</i>	<i>3 / 16.734</i>	<i>1 / 5.667</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>4 / 22.401</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 0.000</i>	<i>- / 16.734</i>	<i>- / 5.667</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 22.401</i>	
Installation													
<i>Modification Item 1 of 1: PL025 Low Profile Photonics Mast (LPPM)</i>													
<i>Subtotal: Installation</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
Total													
Total Cost (Procurement + Support + Installation)	0.000	16.734	5.667	-	-	-	-	-	-	-	-	22.401	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 8	P-1 Line Item Number / Title: 0831 / Sub Periscopes & Imaging Equip	Modification Number / Title: 7 / PL025 Low Profile Photonics Mast (LPPM)

Modification Item 1 of 1: PL025 Low Profile Photonics Mast (LPPM)

Manufacturer Information

Manufacturer Name: L3 KEO				Manufacturer Location: Northhampton, MA			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 30			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Apr 2015	Apr 2016					
Delivery Dates	Oct 2017	Oct 2018					

Installation Information

Method of Implementation: AIT:: Installation Name: LPPM

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Method of Implementation (Organic): CCM

Installation Quantity: 1

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog
---	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	136.421	-	136.421	142.104	215.983	249.189	206.465	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	136.421	-	136.421	142.104	215.983	249.189	206.465	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	136.421	-	136.421	142.104	215.983	249.189	206.465	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	2.377	-	2.377	3.885	2.314	1.544	1.573	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Note: Submarine Electromagnetic Systems including Imaging, Electronic Warfare and Radar programs are managed by PMS435. Imaging Budget Line Item 0831 and Electronic Warfare Budget Line Item 2560 (including Radar) OPN funds are consolidated under BLI 0840 in FY17 and out.

The Submarine Periscopes and Imaging Equipment Program procures the Type 18 and Type 8 periscope upgrades; all variants of Photonics Mast (PM), including Low Profile Photonics Mast (LPPM) and 360 degree imaging capability and incorporates it in the Integrated Submarine Imaging System (ISIS), and VIRGINIA Class imaging upgrades and Photonics land based spares. Commander Naval Submarine Force (CNSF), Operations Review Group (ORG) selected the Periscope Acquisition, Tracking, and Ranging with Improved Observation Techniques (PATRIOT) Type 18 Periscope Rangefinder and the Night Owl Type 8 Infra-Red (IR) Periscope as high priority tactical control technologies to field. By OPNAV Ltr Ser. N77/3U629209, 12 June 2003, OPNAV N87 established the ISIS to rapidly field these systems and integrate existing periscope imagery systems into a single system for installation on board submarines. An ISIS capability development document (CDD) was approved 22 Dec, 2011. The CDD is used to fully integrate the ISIS program of record into the submarine force's rapid insertion technology process and to incorporate Fleet-endorsed requirements such as LPPM. ISIS supports high intensity operations in the littorals, providing the submarine force with the tactical imaging systems necessary to safely and effectively employ its surveillance and weapons capabilities. The IR imaging capability improves imaging at night and in low visibility conditions. The PATRIOT Automated Range Finder provides a 360 degree search independent of the visual search, enhanced situational awareness and provides a collision avoidance capability. Tactical Imagery Technology Insertion includes the common control and displays hardware and software on all platforms regardless of imaging sensors, an integrated imaging system that provides for operator alerts, imaging enhancement tools and contact analysis tools, and a fully Submarine Warfare Federated Tactical Systems (SWFTS) integrated system providing "any display anywhere." Funding improves submarine imaging capability in the areas of: ship safety, Intelligence, Surveillance and Reconnaissance (ISR), tactical control (contact management in the littorals) to provide high quality imaging 24 hours a day, 7 days a week in all weather conditions to support submarine operations worldwide. ISIS provides for the modernization of imaging systems to improve imaging capabilities for the submarine force in support of ISR requirements. This includes the integration of new capabilities, both inboard hardware and software, into the Type 18 and Type 8 Periscopes for LOS ANGELES Class and SEAWOLF Class submarines, the Photonics Mast Variant (PMV) for SSGN, and Photonics Mast upgrades to the VIRGINIA Class AN/BVS-1 including the AN/BVY-1 ISIS capability and LPPM.

PL010 - Imaging ISIS Technical Insertions - Continuing in FY17 funding procures Imaging systems and Technical Insertion kits and spares to upgrade ISIS systems on LOS ANGELES, SEAWOLF, VA and OHIO Class SSGN platforms to allow for Capability Insertion and obsolescence avoidance. FY16 and later procurements also adds funding for improved copper-fiber optic diplooms and hull penetrators required to support advanced Imaging and Early Warning capabilities included in Low Profile Photonics Mast and future 360 degree Imaging masts.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>PL011 - Imaging Block Upgrades - FY17 funding continues procurement of Periscopes and Imaging Equipment reliability, capability, and maintainability upgrades, e.g., Eyepiece Box, periscope mechanical hoisting mechanism upgrades, inboard electronic processing hardware and associated Integrated Logistics Support (ILS), Robust Surveillance Program, Certification of regional repair centers for Imaging System maintenance and technical data. Variable quantities and types are bought in each fiscal year.</p> <p>PL012 - Funds procure replacements in support of Special Support Equipment (SSE) for each maintenance level to ensure systems are maintained in a state of operational readiness. Equipment includes Q-Band Test Equipment, Mast Dynamic Collimator, Eyebox/Mast Test Set, and Antenna/Outer Head Simulator required due to obsolescence and age of existing imaging systems SSE.</p> <p>PL015 - Funding is for Interim Contract Support provided by the periscope manufacturer. The majority of the funding is for Type18 service life extension, depot repair and upgrades for all configurations of Photonics Masts. It also funds all levels of repairs for all types of tactical submarine imaging systems.</p> <p>PL016 - Funding is for imaging systems training requirements to include curriculum development, training materials, and initial factory training pilot course conduct, Navy Training Plans, and instructor advisory services.</p> <p>PL025 - Funding is for the procurement, support and technical insertion of VIRGINIA Class LPPM production and land based spare masts and associated components. The spares will be used for replacement Imaging Masts on VIRGINIA Class Submarines. Quantity of spares will increase with VIRGINIA submarine procurements.</p> <p>PL830 - Production Engineering funds provide the following functions: value engineering; review and evaluation of production design data and documentation; production configuration control; maintenance engineering efforts designed and incorporated into the production manufacturing process, and other related engineering functions that are integral to all of the Imaging Systems and ancillary components.</p> <p>PL900 - Imaging Systems engineering, technical and maintenance services funds provide the following functions: In-Service engineering and technical support to deployed Periscope and Imaging Equipment, imaging system installation and integration planning, SHIPALT and TEMPALT technical data preparation, production hardware design review, engineering/technical support for installations, training materials development, field engineering and technical problem resolution, block upgrade installation planning, configuration management, and maintenance planning including inventory, management, repair, and restoration scheduling.</p> <p>PL927 - Funding is for the installation of Fleet Modernization Program Equipment.</p> <p>PL4M7 - Funding is for the installation of non-Fleet Modernization Program Equipment.</p> <p>(U) The Submarine Support Equipment Program (SSEP) was established to develop and support systems which provide the capability to exploit signal intercepts for tactical support and early warning of threat sensors. The Electronic Warfare Support (ES) Operational Requirements Document (ORD) Serial. No. 570-77-00 dated 20 Dec. 2000, established funding to procure AN/BLQ-10 Electronic Warfare Support and Improved Communication Acquisition/Direction Finding (ICADF) systems to provide a modern ES capability to LOS ANGELES, SEAWOLF, and SSGN Class submarines. Funds procure AN/BLQ-10B(V) Non-Recurring Engineering (NRE), Pre-Production Units (PPU) and augmentation systems for ES Modernization upgrades for all submarine platforms. Funds also procure modification kits for the AN/BLQ-10(V) ES System, Reliability & Maintainability, obsolescence and Operational Field Change Kits for the legacy AN/WLR-8(V)2 ESM system, and the legacy AN/BRD-7 direction finding system. Funds buy unique equipment in limited quantities that are maintained in a pool and rotated among attack submarines as dictated by scheduled operations and to provide specific capability improvements to major SSN sensor systems. AN/BPS 15/16 funding transferred as zero sum adjustment from BLI 0670 starting in FY15 where these requirements were previously supported.</p> <p>ML003 - SSEP special support equipment allows the procurement of special purpose test equipment utilized by the Type Commander Groom Teams. Exact quantities vary from year to year based on Fleet requirements.</p> <p>ML007 - Procures the ICADF communications direction finding system below deck units for installation on LOS ANGELES and SEAWOLF Class submarines.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>ML008 - Procures the ICADF Multi-Function Modular Mast (MMM) Antenna for installation on LOS ANGELES Class submarines and advanced EW collection masts for future modernization.</p> <p>ML010 - Procures Technical Insertions (TI) for installation on LOS ANGELES, SSGN, SEAWOLF, and VIRGINIA Class submarines that provide updates to the AN/BLQ-10(V) configuration baseline which incorporate current Commercial off the Shelf (COTS) processing technology and software to account for obsolescence avoidance, and Reliability, Maintainability and Availability (RMA) and associated Integrated Logistics Support (ILS) and technical data. Hardware builds include supporting platform level Submarine Warfare Federated Tactical Systems (SWFTS) interfaces. TI upgrade kits are procured under various configurations in each fiscal year including required NRE for TI-12, TI-14, TI-16, TI-18, and TI-20.</p> <p>ML014 - Beginning in FY17, consolidates ML005 and ML011 to continue Legacy Submarine Electronic Surveillance Measures (SubESM) procurement including AN/BRD-7 and AN/WLR-8 Reliability and Maintainability (R&M) obsolescence and operational Field Change Kits and other materials for Obsolescence Mitigation, e.g., Digital Display Unit (DDU) obsolescence upgrade, Solid State Memory, Heat Dissipation improvement, related H,M&E sail components, Analog relay replacement, antenna cabling replacement, related Hull, Mechanical & Electrical (H,M&E) sail components and associated Integrated Logistics Support (ILS), and technical data.</p> <p>ML015 - Procures the AN/BLQ-10(V)2/3/4 ES System for installation on LOS ANGELES, SEAWOLF, and SSGN Class submarines.</p> <p>ML017 - Procures AN/BLQ-10(V) and ICADF subsystem Product Improvement Field Change Kits including: emergent Engineering Changes, SIGINT carry-on equipment racks, SWFTS upgrades and associated Integrated Logistics Support (ILS) and technical data. Provide AN/BLQ-10 intermediate level repairs, changes and maintenance activities and associated materials that improve the overall Reliability, Maintainability and Availability of fielded SubESM systems. Procures maintenance and sustainment efforts for AN/BLQ-10 active, deploying fleet assets. Increased funding throughout the FYDP for Submarine Launched Decoy Buoy to reduce risk of counter-detection for operating submarines.</p> <p>ML018 - Funds procure ES Modernization upgrades to the VIRGINIA Class AN/BLQ-10(V)1 ES System including Photonics ES Product Improvement (PEPI-3), PATRIOT Phase B range finder and Technical Insertions (TI).</p> <p>ML020 - Funds procure AN/BLQ-10B(V) Non-Reoccurring Engineering (NRE) and modernization kits for ES Modernization upgrades on all SSN/SSGN platforms. OPNAV direction provided for Next Generation EW Digital Submarine Electronic Warfare System Serial N97/12U144403 dated 17 June 12. The AN/BLQ-10B(V) efforts transform the current AN/BLQ-10(V) system to a digital hardware system that will enable a sustainable, cost effective, software application based modernization process for the rapid fielding of required capabilities to address changing and emerging threats in the Radio Frequency (RF) spectrum. AN/BLQ-10B(V) incorporates a five layered approach including: RF, Digitizing, Interface, Processing, and Display. These layers serve as building blocks to the AN/BLQ-10(V) Modular, Open system, Scalable Architecture (MOSA) approach. . In addition, each procurement aligns with hardware builds supporting platform level Submarine Warfare Federated Tactical Systems (SWFTS) interfaces.</p> <p>ML021 - Procure BPS 15/16 Reliability and Maintainability (R&M) Field Change Kits and other materials for Obsolescence Mitigation. Provide in-service and systems engineering, logistics, material, configuration management, quality assurance, installation and test certification support only for the Submarine Surface Navigation (AN/BPS-15/16) Radar. Also provides for interface with the conjoined Voyage Management System (VMS) and Electronic Chart & Display Information System - Navy (ECDIS-N). BPS 15/16 funding transferred as zero sum adjustment from BLI 0670 starting in FY15 where these requirements were previously supported. Transfer done to provide more focused, submarine centric oversight of these ship safety required systems.</p> <p>ML830 - Production Engineering funds provide the following functions: value engineering; review and evaluation of production design data and documentation; production configuration control; maintenance engineering efforts designed and incorporated into the production manufacturing process, and other related engineering functions that are integral to all production ES Systems and upgrades.</p> <p>ML927 - Provides for the Installation of Equipment including Fleet Modernization Program Installations for shipboard systems.</p> <p>ML4M7 - Provides for the Installation of non-Fleet Modernization Program Equipment.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0840 / Sub Periscope, Imaging and Supt Equip Prog

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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 PERISCOPES & IMAGING EQUIPMENT			- / 0.000	- / -	- / -	- / 15.958	- / -	- / 15.958
P-40a	Submarine Supt Equip Prog			- / 0.000	- / -	- / -	- / 5.338	- / -	- / 5.338
P-3a	1 / PL010 - Imaging ISIS Technical Insertion (ORDALT)			- / 0.000	- / -	- / -	- / 54.066	- / -	- / 54.066
P-3a	2 / PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/ Type 18 (ORDALT)			- / 0.000	- / -	- / -	- / 0.369	- / -	- / 0.369
P-3a	3 / PL025 Low Profile Photonics Mast (LPPM) (SHIPALT)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-3a	4 / ML007 ICADF (SHIPALT (ES SYSTEM COMMS DF))			- / 0.000	- / -	- / -	- / 1.245	- / -	- / 1.245
P-3a	5 / ML008 ICADF MMM ANTENNA (SHIPALT)			- / 0.000	- / -	- / -	- / 1.159	- / -	- / 1.159
P-3a	6 / ML010 TECHNICAL INSERTION (SHIPALT)			- / 0.000	- / -	- / -	- / 16.057	- / -	- / 16.057
P-3a	7 / ML015 AN/BLQ-10(V) SSN ES SYSTEM (SHIPALT)			- / 0.000	- / -	- / -	- / 1.380	- / -	- / 1.380
P-3a	8 / ML017 AN/BLQ-10(V) FIELD CHANGE KITS (ORDALT)			- / 0.000	- / -	- / -	- / 7.404	- / -	- / 7.404
P-3a	9 / ML018 VA CLASS ES MODERNIZATION PATRIOT (SHIPALT)			- / 0.000	- / -	- / -	- / 2.726	- / -	- / 2.726
P-3a	10 / ML020 AN/BLQ-10B (V) (SHIPALT)			- / 0.000	- / -	- / -	- / 30.719	- / -	- / 30.719
P-40	Total Gross/Weapon System Cost			- / 0.000	- / -	- / -	- / 136.421	- / -	- / 136.421

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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 PERISCOPES & IMAGING EQUIPMENT			- / -	- / -	- / -	- / -	- / -	- / -
P-40a	Submarine Supt Equip Prog			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / PL010 - Imaging ISIS Technical Insertion (ORDALT)			- / 44.339	- / 37.251	- / 60.942	- / 61.207	Continuing	Continuing
P-3a	2 / PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/ Type 18 (ORDALT)			- / 0.376	- / 0.384	- / 0.392	- / 0.400	Continuing	Continuing
P-3a	3 / PL025 Low Profile Photonics Mast (LPPM) (SHIPALT)			- / 5.994	- / 18.047	- / 18.349	- / 18.716	- / -	- / 61.106
P-3a	4 / ML007 ICADF (SHIPALT (ES SYSTEM COMMS DF))			- / -	- / -	- / -	- / -	- / -	- / 1.245
P-3a	5 / ML008 ICADF MMM ANTENNA (SHIPALT)			- / -	- / -	- / 1.228	- / 14.319	- / 3.834	- / 20.540
P-3a	6 / ML010 TECHNICAL INSERTION (SHIPALT)			- / 22.731	- / 21.318	- / 32.484	- / 38.918	Continuing	Continuing
P-3a	7 / ML015 AN/BLQ-10(V) SSN ES SYSTEM (SHIPALT)			- / -	- / -	- / -	- / -	- / -	- / 1.380
P-3a	8 / ML017 AN/BLQ-10(V) FIELD CHANGE KITS (ORDALT)			- / 6.962	- / 7.168	- / 7.332	- / 7.999	Continuing	Continuing
P-3a	9 / ML018 VA CLASS ES MODERNIZATION PATRIOT (SHIPALT)			- / 2.955	- / 0.361	- / 0.368	- / -	- / -	- / 6.410
P-3a	10 / ML020 AN/BLQ-10B (V) (SHIPALT)			- / 37.254	- / 105.728	- / 105.808	- / 42.595	- / 6.227	- / 328.331
P-40	Total Gross/Weapon System Cost			- / 142.104	- / 215.983	- / 249.189	- / 206.465	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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy															Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9										P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog					Aggregated Items Title: SUBMARINE PERISCOPES & IMAGING EQUIPMENT				

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) PL012 PERISCOPE SPECIAL SUPPORT EQUIPMENT																				
1.1) SPECIAL SUPPORT EQUIPMENT	A		-	-	-	-	-	-	-	-	-	-	-	0.546	-	-	-	-	-	0.546
Subtotal: 1) PL012 PERISCOPE SPECIAL SUPPORT EQUIPMENT			-	-	0.000	-	-	-	-	-	-	-	-	0.546	-	-	-	-	-	0.546
2) PL015 PERISCOPE INTERIM CONTRACTOR SUPPORT ⁽¹⁾																				
2.1) INTERIM CONTRACTOR SUPPORT	A		-	-	-	-	-	-	-	-	-	-	-	11.179	-	-	-	-	-	11.179
Subtotal: 2) PL015 PERISCOPE INTERIM CONTRACTOR SUPPORT			-	-	0.000	-	-	-	-	-	-	-	-	11.179	-	-	-	-	-	11.179
3) PL016 PERISCOPE TRAINING																				
3.1) TRAINING	A		-	-	-	-	-	-	-	-	-	-	-	0.182	-	-	-	-	-	0.182
Subtotal: 3) PL016 PERISCOPE TRAINING			-	-	0.000	-	-	-	-	-	-	-	-	0.182	-	-	-	-	-	0.182
4) PL830 PERISCOPE PRODUCTION ENGINEERING																				
4.1) PRODUCTION ENGINEERING	A		-	-	-	-	-	-	-	-	-	-	-	3.646	-	-	-	-	-	3.646
Subtotal: 4) PL830 PERISCOPE PRODUCTION ENGINEERING			-	-	0.000	-	-	-	-	-	-	-	-	3.646	-	-	-	-	-	3.646
5) PL900 PERISCOPE CONSULTING SERVICES																				
5.1) CONSULTING SERVICES	A		-	-	-	-	-	-	-	-	-	-	-	0.405	-	-	-	-	-	0.405
Subtotal: 5) PL900 PERISCOPE CONSULTING SERVICES			-	-	0.000	-	-	-	-	-	-	-	-	0.405	-	-	-	-	-	0.405
Total			-	-	0.000	-	-	-	-	-	-	-	-	15.958	-	-	-	-	-	15.958

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

Footnotes:

⁽¹⁾ FY17 PL015 restores required full funding to support Type 18 Service Life Extension overhauls and depot repairs and upgrades for all configurations of Photonics Masts (including LPPM prototypes) requirements. Also supports increased quantities of VA Class Submarines in service.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog **Aggregated Items Title:** Submarine Supt Equip Prog

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) ML003 SSEP SPECIAL SUPPORT EQUIPMENT																				
1.1) SPECIAL SUPPORT EQUIPMENT	A		-	-	-	-	-	-	-	-	-	-	-	0.329	-	-	-	-	-	0.329
Subtotal: 1) ML003 SSEP SPECIAL SUPPORT EQUIPMENT			-	-	0.000	-	-	-	-	-	-	-	-	0.329	-	-	-	-	-	0.329
2) ML014 Legacy Submarine Electronic Surveillance Measures (SubESM) ⁽²⁾																				
2.1) LEGACY SubESM	A		-	-	-	-	-	-	-	-	-	-	-	0.480	-	-	-	-	-	0.480
Subtotal: 2) ML014 Legacy Submarine Electronic Surveillance Measures (SubESM)			-	-	0.000	-	-	-	-	-	-	-	-	0.480	-	-	-	-	-	0.480
3) ML830 PRODUCTION ENGINEERING																				
3.1) PRODUCTION ENGINEERING	A		-	-	-	-	-	-	-	-	-	-	-	3.343	-	-	-	-	-	3.343
Subtotal: 3) ML830 PRODUCTION ENGINEERING			-	-	0.000	-	-	-	-	-	-	-	-	3.343	-	-	-	-	-	3.343
4) ML021 AN/BPS 15/16 FCKs ⁽³⁾																				
4.1) AN/BPS 15/16 FCKs	A		-	-	-	-	-	-	-	-	-	-	-	1.186	-	-	-	-	-	1.186
Subtotal: 4) ML021 AN/BPS 15/16 FCKs			-	-	0.000	-	-	-	-	-	-	-	-	1.186	-	-	-	-	-	1.186
Total			-	-	0.000	-	-	-	-	-	-	-	-	5.338	-	-	-	-	-	5.338

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

Footnotes:

⁽²⁾ Starting in FY17 and out, ML005 and ML011 were shifted to new cost code ML014 for consolidation.

⁽³⁾ Zero sum transfer of funds from BLI 0670 starting in FY15. Transfer of funding conducted to provide more focused, submarine centric oversight of radar functionality.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog				Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	54.066	-	54.066	44.339	37.251	60.942	61.207	Continuing	Continuing
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	54.066	-	54.066	44.339	37.251	60.942	61.207	Continuing	Continuing
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	54.066	-	54.066	44.339	37.251	60.942	61.207	Continuing	Continuing
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides for the modernization of Imaging systems and Technical Insertion kits to upgrade Integrated Submarine Imaging System (ISIS) on LOS ANGELES, SEAWOLF, VIRGINIA and OHIO Class SSGN platforms in support of Intelligence, Surveillance and Reconnaissance (ISR) requirements. Similar to FY16, FY17 increase to VIRGINIA Tech Insertion unit costs reflect addition of copper/fiber diplooms and hull penetrators (\$2.651M/ship increase) needed to field LPPM and future masts on these modernization hulls as well as higher base unit cost of VIRGINIA Tech Insertions. TI-16 base costs increased due to higher obsolescence change out. TI-14 had re-utilized significant amounts of prior TI hardware which is no longer viable for TI-16.

VIRGINIA Initial ISIS Backfits also contain copper/fiber updates for those hulls. Budgeted cost is similar for these efforts as FY16 adjusted for inflation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog						Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion			
Models of Systems Affected: ISIS TI				Modification Type: ORDALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> PL010 - Imaging ISIS Technical Insertion													
B Kits													
Recurring													
1.1.1) 688/21 TECHNICAL INSERTION - NonOrganic	2 / 0.000	6 / -	7 / -	1 / 1.018	- / -	1 / 1.018	8 / 8.300	6 / 6.348	5 / 5.397	- / -	- / -	35 / 21.063	
1.1.2) VA TECHNICAL INSERTION - NonOrganic ⁽⁴⁾	- / -	- / -	- / -	3 / 14.631	- / -	3 / 14.631	3 / 14.910	- / -	6 / 29.580	10 / 46.510	- / -	22 / 105.631	
1.1.3) SSGN TECHNICAL INSERTION - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.776	2 / 2.831	- / -	- / -	4 / 5.607	
1.1.4) VA ISIS BACKFIT - NonOrganic ⁽⁵⁾	- / -	- / -	2 / -	2 / 14.243	- / -	2 / 14.243	- / -	- / -	- / -	- / -	- / -	4 / 14.243	
1.1.5) SSBN BACKFIT - NonOrganic	- / -	- / -	2 / -	3 / 0.580	- / -	3 / 0.580	3 / 0.591	2 / 0.402	3 / 0.615	1 / 0.209	- / -	14 / 2.397	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 30.472	- / -	- / 30.472	- / 23.801	- / 9.526	- / 38.423	- / 46.719	- / -	- / 148.941	
<i>Subtotal: PL010 - Imaging ISIS Technical Insertion</i>	2 / 0.000	6 / -	11 / -	9 / 30.472	- / -	9 / 30.472	14 / 23.801	10 / 9.526	16 / 38.423	11 / 46.719	- / -	79 / 148.941	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 30.472	- / -	- / 30.472	- / 23.801	- / 9.526	- / 38.423	- / 46.719	- / -	- / 148.941	
Support (All Modification Items)													
2.1) ISIS TECHNICAL INSERTION NRE ⁽⁶⁾	- / -	- / -	- / -	- / 19.473	- / -	- / 19.473	- / 15.525	- / 22.140	- / 19.332	- / 6.153	Continuing	Continuing	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / 19.473	- / -	- / 19.473	- / 15.525	- / 22.140	- / 19.332	- / 6.153	Continuing	Continuing	
Installation													
<i>Modification Item 1 of 1:</i> PL010 - Imaging ISIS Technical Insertion	- / 0.000	- / -	- / -	- / 4.121	- / -	- / 4.121	- / 5.013	- / 5.585	- / 3.187	- / 8.335	- / 9.508	- / 35.749	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 4.121	- / -	- / 4.121	- / 5.013	- / 5.585	- / 3.187	- / 8.335	- / 9.508	- / 35.749	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	54.066	-	54.066	44.339	37.251	60.942	61.207	Continuing	Continuing	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion

Modification Item 1 of 1: PL010 - Imaging ISIS Technical Insertion

Manufacturer Information

Manufacturer Name: Multiple Vendors	Manufacturer Location: Various
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2015	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021
Delivery Dates	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022

Installation Information

Method of Implementation: AIT:: Installation Name: 688/21 TECHNICAL INSERTION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / -
FY 2015	- / -	- / -	6 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / -
FY 2016	- / -	- / -	- / -	7 / 2.170	- / -	7 / 2.170	- / -	- / -	- / -	- / -	- / -	7 / 2.170
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.316	- / -	- / -	- / -	- / -	1 / 0.316
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 2.578	- / -	- / -	- / -	8 / 2.578
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.972	- / -	- / -	6 / 1.972
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.677	- / -	5 / 1.677
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / -	6 / -	7 / 2.170	- / -	7 / 2.170	1 / 0.316	8 / 2.578	6 / 1.972	5 / 1.677	- / -	35 / 8.713

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	1	1	-	-	2	2	2	-	3	2	2	-	1	-	-	-	3	3	2	-	3	2	1	-	2	2	1	-	35
Out	-	-	1	1	-	-	2	2	2	-	3	2	2	-	1	-	-	-	3	3	2	-	3	2	1	-	2	2	1	-	35

Method of Implementation: AIT:: Installation Name: VA TECHNICAL INSERTION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion

Modification Item 1 of 1: PL010 - Imaging ISIS Technical Insertion

Installation Information

Method of Implementation: AIT:: Installation Name: VA TECHNICAL INSERTION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.588	- / -	- / -	- / -	- / -	3 / 2.588
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.639	- / -	- / -	- / -	3 / 2.639
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 5.291	6 / 5.291
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 8.995	10 / 8.995
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.588	3 / 2.639	- / -	6 / 5.291	10 / 8.995	22 / 19.513

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	1	1	1	-	-	-	-	-	3	2	1	10	22
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	1	1	1	-	-	-	-	-	3	2	1	10	22

Method of Implementation: AIT:: Installation Name: SSGN TECHNICAL INSERTION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.965	- / -	- / -	2 / 0.965
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.984	- / -	2 / 0.984
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.965	2 / 0.984	- / -	4 / 1.949

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion

Modification Item 1 of 1: PL010 - Imaging ISIS Technical Insertion

Installation Information

Method of Implementation: AIT:: Installation Name: SSGN TECHNICAL INSERTION

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	-	-	-	-	4
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	-	-	-	-	4

Method of Implementation: AIT:: Installation Name: VA ISIS BACKFIT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	2 / 1.715	- / -	2 / 1.715	- / -	- / -	- / -	- / -	- / -	2 / 1.715
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.748	- / -	- / -	- / -	- / -	2 / 1.748
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	2 / 1.715	- / -	2 / 1.715	2 / 1.748	- / -	- / -	- / -	- / -	4 / 3.463

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Out	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4

Method of Implementation: AIT:: Installation Name: SSBN BACKFIT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 1 / PL010 - Imaging ISIS Technical Insertion

Modification Item 1 of 1: PL010 - Imaging ISIS Technical Insertion

Installation Information

Method of Implementation: AIT:: Installation Name: SSBN BACKFIT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	2 / 0.236	- / -	2 / 0.236	- / -	- / -	- / -	- / -	- / -	2 / 0.236
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.361	- / -	- / -	- / -	- / -	3 / 0.361
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.368	- / -	- / -	- / -	3 / 0.368
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.250	- / -	- / -	2 / 0.250
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.383	- / 0.383	3 / 0.766
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.130	1 / 0.130
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	2 / 0.236	- / -	2 / 0.236	3 / 0.361	3 / 0.368	2 / 0.250	3 / 0.383	1 / 0.513	14 / 2.111

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	1	-	1	1	1	-	1	1	-	-	1	1	1	1	14
Out	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	1	-	1	1	1	-	1	1	-	-	1	1	1	1	14

Footnotes:

- (4) FY17 unit costs comparable to FY16 plus inflation and include funds for four (4) copper/fiber diploop and hull penetrator sets required for VA Class Submarines receiving ISIS TI-16 upgrade to field LPPM and future masts as well as base TI increased obsolescence changeout.
- (5) FY17 unit cost includes copper fiber diploop and hull penetrator sets required for VA Class Submarines receiving ISIS TI-16 upgrade to field LPPM and future masts as well as base TI costs due to increased obsolescence.
- (6) TI/APB NRE reflects funding required for productionization of increased quantity/complexity of externally developed Advanced Processor Build capabilities and ongoing ISIS software stability support.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog				Modification Number / Title: 2 / PL011 Imaging Block Upgrades/ Technical Insertions Imaging: Type 8/ Type 18				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	0.369	-	0.369	0.376	0.384	0.392	0.400	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	0.369	-	0.369	0.376	0.384	0.392	0.400	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	0.369	-	0.369	0.376	0.384	0.392	0.400	Continuing	Continuing
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides obsolescence related upgrades for Submarine Periscopes. One (1) set is procured in each fiscal year that includes variable quantities.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 2 / PL011 Imaging Block Upgrades/ Technical Insertions Imaging: Type 8/ Type 18

Models of Systems Affected: TYPE 8/TYPE 18	Modification Type: ORDALT	Related RDT&E PEs:
---	----------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/Type 18												
B Kits												
Recurring												
1.1.1) TYPE 8/TYPE 18 - NonOrganic	65 / 0.000	1 / -	1 / -	1 / 0.251	- / -	1 / 0.251	1 / 0.256	1 / 0.261	1 / 0.267	1 / 0.272	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 0.251	- / -	- / 0.251	- / 0.256	- / 0.261	- / 0.267	- / 0.272	Continuing	Continuing
<i>Subtotal: PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/Type 18</i>	65 / 0.000	1 / -	1 / -	1 / 0.251	- / -	1 / 0.251	1 / 0.256	1 / 0.261	1 / 0.267	1 / 0.272	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 0.251	- / -	- / 0.251	- / 0.256	- / 0.261	- / 0.267	- / 0.272	Continuing	Continuing
Installation												
<i>Modification Item 1 of 1:</i> PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/Type 18	- / 0.000	- / -	- / -	- / 0.118	- / -	- / 0.118	- / 0.120	- / 0.123	- / 0.125	- / 0.128	- / -	- / 0.614
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 0.118	- / -	- / 0.118	- / 0.120	- / 0.123	- / 0.125	- / 0.128	- / -	- / 0.614
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	-	0.369	-	0.369	0.376	0.384	0.392	0.400	Continuing	Continuing

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 2 / PL011 Imaging Block Upgrades/ Technical Insertions Imaging: Type 8/ Type 18

Modification Item 1 of 1: PL011 Imaging Block Upgrades/Technical Insertions Imaging: Type 8/Type 18

Manufacturer Information

Manufacturer Name: Multiple Vendors	Manufacturer Location: Various
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 14

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2015	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	
Delivery Dates	May 2016	May 2017	May 2018	May 2019	May 2020	May 2021	

Installation Information

Method of Implementation: AIT:: Installation Name: TYPE 8/TYPE 18

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	64 / 0.000	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	65 / -
FY 2015	- / -	- / -	1 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -
FY 2016	- / -	- / -	- / -	1 / 0.118	- / -	1 / 0.118	- / -	- / -	- / -	- / -	- / -	1 / 0.118
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.120	- / -	- / -	- / -	- / -	1 / 0.120
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.123	- / -	- / -	- / -	1 / 0.123
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.125	- / -	- / -	1 / 0.125
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.128	- / -	1 / 0.128
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	64 / 0.000	1 / -	1 / -	1 / 0.118	- / -	1 / 0.118	1 / 0.120	1 / 0.123	1 / 0.125	1 / 0.128	1 / -	72 / 0.614

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	64	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	1	72
Out	64	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	1	72

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog				Modification Number / Title: 3 / PL025 Low Profile Photonics Mast (LPPM)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	5.994	18.047	18.349	18.716	-	61.106
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	5.994	18.047	18.349	18.716	-	61.106
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	5.994	18.047	18.349	18.716	-	61.106
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

VA Class advanced Low Profile Imaging masts including Low Profile Photonics Mast (LPPM) with high definition color, short wave infrared, and laser range finder capabilities. Procures initial modernization assets as well as spare masts later in FYDP to maintain overall spares ratio for imaging masts as quantity of imaging equipped ships increases. Maintaining sufficient quantities of installed and spare low profile masts imaging is essential to meet PACFLT requirements for all deploying VA class submarines in the Pacific to be equipped with low profile imaging masts. Beginning in FY20, procurement of Task Oriented Tech Insertion Mast (TOTIM).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog					Modification Number / Title: 3 / PL025 Low Profile Photonics Mast (LPPM)			
Models of Systems Affected: Photonics Mast				Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: PL025 Low Profile Photonics Mast (LPPM)</i>													
B Kits													
Recurring													
1.1.1) LPPM - NonOrganic	- / -	2 / -	1 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / -	
1.1.2) LPPM SPARE - Organic ⁽⁷⁾	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.879	3 / 17.989	- / -	- / -	- / -	4 / 23.868	
1.1.3) CCM - Organic	- / -	1 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	
1.1.4) TOTIM - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 18.349	2 / 18.716	- / -	4 / 37.065	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 5.879	- / 17.989	- / 18.349	- / 18.716	- / -	- / 60.933	
<i>Subtotal: PL025 Low Profile Photonics Mast (LPPM)</i>	- / -	3 / -	1 / -	- / -	- / -	- / -	1 / 5.879	3 / 17.989	2 / 18.349	2 / 18.716	- / -	12 / 60.933	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 5.879	- / 17.989	- / 18.349	- / 18.716	- / -	- / 60.933	
Installation													
<i>Modification Item 1 of 1: PL025 Low Profile Photonics Mast (LPPM)</i>													
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.115	- / 0.058	- / -	- / -	- / -	- / 0.173	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	5.994	18.047	18.349	18.716	-	61.106	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 3 / PL025 Low Profile Photonics Mast (LPPM)

Modification Item 1 of 1: PL025 Low Profile Photonics Mast (LPPM)

Manufacturer Information

Manufacturer Name: L3 KEO	Manufacturer Location: Northhampton, MA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 30

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Apr 2015	Apr 2016		Apr 2018	Apr 2019		
Delivery Dates	Oct 2017	Oct 2018		Apr 2020	Apr 2021		

Manufacturer Name: TBD (Competitive Procurement)	Manufacturer Location: TBD (Competitive Procurement)
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 24

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates						Mar 2020	Mar 2021
Delivery Dates						Mar 2022	Mar 2023

Installation Information

Method of Implementation: AIT:: Installation Name: LPPM

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.115	- / -	- / -	- / -	- / -	2 / 0.115
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.058	- / -	- / -	- / -	1 / 0.058
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.115	1 / 0.058	- / -	- / -	- / -	3 / 0.173

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 3 / PL025 Low Profile Photonics Mast (LPPM)

Modification Item 1 of 1: PL025 Low Profile Photonics Mast (LPPM)

Installation Information

Method of Implementation: AIT:: Installation Name: TOTIM

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / -	2 / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / -	2 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / -	4 / -

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4

Method of Implementation (Organic): LPPM SPARE - Not Installed **Installation Quantity:** 4

Method of Implementation (Organic): CCM **Installation Quantity:** 1

Footnotes:

(7) FY18 and Out Procurement production leadtimes decrease to 24 months.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 4 / ML007 ICADF
---	---	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	1.245	-	1.245	-	-	-	-	-	1.245
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	1.245	-	1.245	-	-	-	-	-	1.245
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	1.245	-	1.245	-	-	-	-	-	1.245

(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:

Provides advanced low-band COMINT Direction Finding (DF) capability compatible with CLASSIC TROLL and AN/BLQ-10 SSN ES system. Replaces obsolete AN/BRD-7 below decks equipment with modern, open architecture system compliant with Maritime Cryptologic Architecture.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0840 / Sub Periscope, Imaging and Supt Equip Prog **Modification Number / Title:** 4 / ML007 ICADF

Models of Systems Affected: ICADF **Modification Type:** SHIPALT (ES SYSTEM COMMS DF) **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> ML007 ICADF												
B Kits												
Recurring												
1.1.1) ICADF - NonOrganic	27 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / -
1.1.2) NIOC TRANSFER EQUIPMENT - NonOrganic ⁽⁶⁾	11 / 0.000	2 / -	1 / -	1 / -	- / -	1 / -	- / -	- / -	- / -	- / -	- / -	15 / -
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: ML007 ICADF</i>	38 / 0.000	2 / -	1 / -	1 / -	- / -	1 / -	- / -	- / -	- / -	- / -	- / -	42 / -
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Installation												
<i>Modification Item 1 of 1:</i> ML007 ICADF	- / 0.000	- / -	- / -	- / 1.245	- / -	- / 1.245	- / -	- / -	- / -	- / -	- / -	- / 1.245
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 1.245	- / -	- / 1.245	- / -	- / -	- / -	- / -	- / -	- / 1.245
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	-	1.245	-	1.245	-	-	-	-	-	1.245

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 4 / ML007 ICADF

Modification Item 1 of 1: ML007 ICADF

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Syracuse, NY
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 20

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Mar 2016					
Delivery Dates		Nov 2017					

Installation Information

Method of Implementation: AIT (ES SYSTEM COMMS DF):: Installation Name: ICADF

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	27 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	27 / -
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	27 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / -

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Method of Implementation: AIT (ES SYSTEM COMMS DF):: Installation Name: NIOC TRANSFER EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	11 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	11 / -
FY 2015	- / -	2 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 4 / ML007 ICADF

Modification Item 1 of 1: ML007 ICADF

Installation Information

Method of Implementation: AIT (ES SYSTEM COMMS DF):: Installation Name: NIOC TRANSFER EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2016	- / -	- / -	1 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -
FY 2017	- / -	- / -	- / -	1 / 1.245	- / -	1 / 1.245	- / -	- / -	- / -	- / -	- / -	1 / 1.245
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 0.000	2 / -	1 / -	1 / 1.245	- / -	1 / 1.245	- / -	- / -	- / -	- / -	- / -	15 / 1.245

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	11	-	-	1	1	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Out	11	-	-	1	1	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15

Footnotes:

⁽⁸⁾ Transfer Units are refurbished after receipt from NIOC prior to installation, no procurement cost associated.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 5 / ML008 ICADF MMM ANTENNA
---	---	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	1.159	-	1.159	-	-	1.228	14.319	3.834	20.540
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	1.159	-	1.159	-	-	1.228	14.319	3.834	20.540
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	1.159	-	1.159	-	-	1.228	14.319	3.834	20.540

(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:

Synchronizes improved low-band direction finding SIGINT sensor with coordinated N77/CNSG CLASSIC TROLL procurement. Replaces obsolete AN/BRD-7 antenna equipment with modern, open-architecture system compliant with Maritime Cryptologic Architecture. Procurement of FY16 spares required to support catastrophic failure of installed fleet assets and resultant loss of Ao and mission capability.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog						Modification Number / Title: 5 / ML008 ICADF MMM ANTENNA			
Models of Systems Affected: MULTI FUNCTION MODULAR MAST				Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: ML008 ICADF MMM ANTENNA</i>													
B Kits													
Recurring													
1.1.1) Multi Functional Modular Mast - NonOrganic ⁽⁹⁾	19 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 14.319	- / -	22 / 14.319	
1.1.2) MMM Spare - Organic	- / -	- / -	2 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / -	
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 14.319</i>	<i>- / -</i>	<i>- / 14.319</i>	
<i>Subtotal: ML008 ICADF MMM ANTENNA</i>	<i>19 / 0.000</i>	<i>- / -</i>	<i>2 / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>3 / 14.319</i>	<i>- / -</i>	<i>24 / 14.319</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 14.319</i>	<i>- / -</i>	<i>- / 14.319</i>	
Installation													
<i>Modification Item 1 of 1: ML008 ICADF MMM ANTENNA</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 1.159</i>	<i>- / -</i>	<i>- / 1.159</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 1.228</i>	<i>- / -</i>	<i>- / 3.834</i>	<i>- / 6.221</i>	
<i>Subtotal: Installation</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 1.159</i>	<i>- / -</i>	<i>- / 1.159</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 1.228</i>	<i>- / -</i>	<i>- / 3.834</i>	<i>- / 6.221</i>	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	1.159	-	1.159	-	-	1.228	14.319	3.834	20.540	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 5 / ML008 ICADF MMM ANTENNA

Modification Item 1 of 1: ML008 ICADF MMM ANTENNA

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: SYRACUSE, NY
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 20

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Mar 2016					
Delivery Dates		Nov 2017					

Manufacturer Name: TBD (Competitive Procurement)	Manufacturer Location: TBD (Competitive Procurement)
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 20

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							Mar 2021
Delivery Dates							Nov 2022

Installation Information

Method of Implementation: AIT:: Installation Name: Multi Functional Modular Mast

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	15 / 0.000	1 / 0.000	1 / 0.000	1 / 1.159	- / 0.000	1 / 1.159	- / -	- / -	1 / 1.228	- / -	- / 0.000	19 / 2.387
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.834	3 / 3.834
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	15 / 0.000	1 / -	1 / -	1 / 1.159	- / -	1 / 1.159	- / -	- / -	1 / 1.228	- / -	3 / 3.834	22 / 6.221

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	3	22
Out	15	-	-	-	1	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	3	22

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 5 / ML008 ICADF MMM ANTENNA
Modification Item 1 of 1: ML008 ICADF MMM ANTENNA		
Installation Information		
Method of Implementation (Organic): MMM Spare - Not Installed		Installation Quantity: 2

Footnotes:

⁽⁹⁾ FY17 MMM installation originally planned for FY12 on SSN765 in conjunction with last BLQ-10A installation but rescheduled to FY17 when ship's availability postponed. Similarly FY20 MMM installation on SSN757 originally planned as a unique EW only availability (i.e. not in conjunction with other SWFTS modernizations) but was cancelled and replanned in conjunction with next scheduled SWFTS modernization.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog				Modification Number / Title: 6 / ML010 TECHNICAL INSERTION				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	16.057	-	16.057	22.731	21.318	32.484	38.918	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	16.057	-	16.057	22.731	21.318	32.484	38.918	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	16.057	-	16.057	22.731	21.318	32.484	38.918	Continuing	Continuing
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

TI Processor upgrade provides additional computing capability over previous TI baselines and replaces out of production systems for installation on LOS ANGELES, SSGN, SEAWOLF, and VIRGINIA Class submarines. Provides updates to the AN/BLQ-10 (V) configuration baseline which incorporates current Commercial off the Shelf (COTS) processing technology and software to account for obsolescence avoidance, and Reliability, Maintainability and Availability (RMA) and associated Integrated Logistics Support (ILS) and technical data. Hardware builds include supporting platform level Submarine Warfare Federated Tactical Systems (SWFTS) interfaces.

Capability and Technical Insertion for AN/BLQ-10(V) provide spiral improvements to the baseline system which are designed to counter against new and evolving threat emitters. This effort is the transition of the EW AN/BLQ-10 TI modernization process to synchronize with SWFTS TI/APB process and model.

TI-16 baseline represents a significant change and increase in capabilities to enable software processing of digital data provided by EW Next Generation Architecture (NGA) hardware. TI-16 introduces the EW Server system that centralizes in software many functions that were previously handled in older, less capable hardware systems. Vastly increases coordination and dissemination of data.

Due to proliferation of multiple, older TI configurations, TI-16 still required to procure significant hardware updates to baseline older systems prior to installing new capabilities.

TI-16 is a concurrent requirement for installing EW NGA hardware.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog						Modification Number / Title: 6 / ML010 TECHNICAL INSERTION			
Models of Systems Affected: TECHNICAL INSERTION				Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: ML010 TECHNICAL INSERTION</i>													
B Kits													
Recurring													
1.1.1) TI/APB - NonOrganic	16 / 0.000	4 / -	7 / -	6 / 10.608	- / -	6 / 10.608	11 / 17.622	8 / 13.848	13 / 26.247	10 / 30.205	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 10.608	- / -	- / 10.608	- / 17.622	- / 13.848	- / 26.247	- / 30.205	Continuing	Continuing	
<i>Subtotal: ML010 TECHNICAL INSERTION</i>	16 / 0.000	4 / -	7 / -	6 / 10.608	- / -	6 / 10.608	11 / 17.622	8 / 13.848	13 / 26.247	10 / 30.205	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 10.608	- / -	- / 10.608	- / 17.622	- / 13.848	- / 26.247	- / 30.205	Continuing	Continuing	
Support (All Modification Items)													
2.1) TI/APB NRE	- / -	- / -	- / -	- / 2.405	- / -	- / 2.405	- / 2.451	- / 2.499	- / 2.549	- / 2.601	- / -	- / 12.505	
2.2) TI/APB CCM	3 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / -	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / 2.405	- / -	- / 2.405	- / 2.451	- / 2.499	- / 2.549	- / 2.601	- / -	- / 12.505	
Installation													
<i>Modification Item 1 of 1: ML010 TECHNICAL INSERTION</i>	- / 0.000	- / -	- / -	- / 3.044	- / -	- / 3.044	- / 2.658	- / 4.971	- / 3.688	- / 6.112	- / 4.796	- / 25.269	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 3.044	- / -	- / 3.044	- / 2.658	- / 4.971	- / 3.688	- / 6.112	- / 4.796	- / 25.269	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	16.057	-	16.057	22.731	21.318	32.484	38.918	Continuing	Continuing	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 6 / ML010 TECHNICAL INSERTION

Modification Item 1 of 1: ML010 TECHNICAL INSERTION

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Syracuse, NY
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2015	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021
Delivery Dates	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022

Installation Information

Method of Implementation: AIT:: Installation Name: TI/APB

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	12 / 0.000	4 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	16 / -
FY 2015	- / -	- / -	4 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / -
FY 2016	- / -	- / -	- / -	7 / 3.044	- / -	7 / 3.044	- / -	- / -	- / -	- / -	- / -	7 / 3.044
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.658	- / -	- / -	- / -	- / -	6 / 2.658
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 4.971	- / -	- / -	- / -	11 / 4.971
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 3.688	- / -	- / -	8 / 3.688
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 6.112	- / -	13 / 6.112
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 4.796	10 / 4.796
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	12 / 0.000	4 / -	4 / -	7 / 3.044	- / -	7 / 3.044	6 / 2.658	11 / 4.971	8 / 3.688	13 / 6.112	10 / 4.796	75 / 25.269

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	12	-	2	1	1	-	1	2	1	-	4	2	1	-	3	2	1	-	4	4	3	-	4	3	1	-	6	5	2	10	75
Out	12	-	2	1	1	-	1	2	1	-	4	2	1	-	3	2	1	-	4	4	3	-	4	3	1	-	6	5	2	10	75

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog				Modification Number / Title: 7 / ML015 AN/BLQ-10(V) SSN ES SYSTEM				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	1.380	-	1.380	-	-	-	-	-	1.380
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	1.380	-	1.380	-	-	-	-	-	1.380
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	1.380	-	1.380	-	-	-	-	-	1.380
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides fully integrated, covert, forward area radar signal intercept and ID capability for installation on LOS ANGELES, SEAWOLF and SSGN Class Submarines.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog					Modification Number / Title: 7 / ML015 AN/BLQ-10(V) SSN ES SYSTEM			
Models of Systems Affected: AN/BLQ-10(V)2/3/4				Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: ML015 AN/BLQ-10(V) SSN ES SYSTEM</i>													
B Kits													
Recurring													
1.1.1) AN/BLQ-10(V) SSN ES SYSTEM - NonOrganic (10)	44 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / -	
1.1.2) AN/BLQ-10(V) SSN ES SYSTEM CCM - Organic	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
<i>Subtotal: ML015 AN/BLQ-10(V) SSN ES SYSTEM</i>	<i>45 / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>45 / -</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
Installation													
<i>Modification Item 1 of 1: ML015 AN/BLQ-10(V) SSN ES SYSTEM</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 1.380</i>	<i>- / -</i>	<i>- / 1.380</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 1.380</i>	
<i>Subtotal: Installation</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 1.380</i>	<i>- / -</i>	<i>- / 1.380</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 1.380</i>	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	1.380	-	1.380	-	-	-	-	-	1.380	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 7 / ML015 AN/BLQ-10(V) SSN ES SYSTEM

Modification Item 1 of 1: ML015 AN/BLQ-10(V) SSN ES SYSTEM

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Syracuse, NY
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 16

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: AN/BLQ-10(V) SSN ES SYSTEM

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	43 / 0.000	- / -	- / -	1 / 1.380	- / 0.000	1 / 1.380	- / -	- / -	- / -	- / -	- / 0.000	44 / 1.380
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	43 / 0.000	- / -	- / -	1 / 1.380	- / -	1 / 1.380	- / -	- / -	- / -	- / -	- / -	44 / 1.380

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	43	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44
Out	43	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44

Method of Implementation (Organic): AN/BLQ-10(V) SSN ES SYSTEM CCM

Installation Quantity: 1

Footnotes:

⁽¹⁰⁾ Installation of the last BLQ-10A system was originally planned for FY12 on SSN765 but ship modernization availability was postponed until FY17.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog			Modification Number / Title: 8 / ML017 ANBLQ-10(V) FIELD CHANGE KITS				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	7.404	-	7.404	6.962	7.168	7.332	7.999	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	7.404	-	7.404	6.962	7.168	7.332	7.999	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	7.404	-	7.404	6.962	7.168	7.332	7.999	Continuing	Continuing
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures AN/BLQ-10(V) and ICADF subsystem Product Improvement Field Change Kits (FCK). AN/BLQ-10 FCKs are procured in variable quantities and types, and are bought from a variety of vendors each fiscal year.

Increased funding throughout the FYDP for Submarine Launched Decoy Buoy to reduce risk of counter-detection for operating submarines.

Funding Profile for the Buoys are as follows:

- FY17 \$1.400M
- FY18 \$0.694M
- FY19 \$0.775M
- FY20 \$0.810M
- FY21 \$1.241M

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog						Modification Number / Title: 8 / ML017 ANBLQ-10(V) FIELD CHANGE KITS		
Models of Systems Affected: AN/BLQ-10(V)				Modification Type: ORDALT				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: ML017 ANBLQ-10(V) FIELD CHANGE KITS</i>												
B Kits												
Recurring												
1.1.1) AN/BLQ-10(V) FCKs - NonOrganic ⁽¹¹⁾	3 / 0.000	1 / -	1 / -	1 / 6.781	- / -	1 / 6.781	1 / 6.179	1 / 6.369	1 / 6.516	1 / 7.061	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 6.781	- / -	- / 6.781	- / 6.179	- / 6.369	- / 6.516	- / 7.061	Continuing	Continuing
<i>Subtotal: ML017 ANBLQ-10(V) FIELD CHANGE KITS</i>	3 / 0.000	1 / -	1 / -	1 / 6.781	- / -	1 / 6.781	1 / 6.179	1 / 6.369	1 / 6.516	1 / 7.061	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 6.781	- / -	- / 6.781	- / 6.179	- / 6.369	- / 6.516	- / 7.061	Continuing	Continuing
Installation												
<i>Modification Item 1 of 1: ML017 ANBLQ-10(V) FIELD CHANGE KITS</i>												
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 0.623	- / -	- / 0.623	- / 0.783	- / 0.799	- / 0.816	- / 0.938	- / -	- / 3.959
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	-	7.404	-	7.404	6.962	7.168	7.332	7.999	Continuing	Continuing

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 8 / ML017 ANBLQ-10(V) FIELD CHANGE KITS

Modification Item 1 of 1: ML017 ANBLQ-10(V) FIELD CHANGE KITS

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Syracuse, NY
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 6

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Dec 2014	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020
Delivery Dates	Jun 2015	Jun 2016	Jun 2017	Jun 2018	Jun 2019	Jun 2020	Jun 2021

Installation Information

Method of Implementation: AIT:: Installation Name: AN/BLQ-10(V) FCKs

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	3 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	3 / -
FY 2015	- / -	1 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -
FY 2016	- / -	- / -	1 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -
FY 2017	- / -	- / -	- / -	1 / 0.623	- / -	1 / 0.623	- / -	- / -	- / -	- / -	- / -	1 / 0.623
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.783	- / -	- / -	- / -	- / -	1 / 0.783
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.799	- / -	- / -	- / -	1 / 0.799
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.816	- / -	- / -	1 / 0.816
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.938	- / -	1 / 0.938
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	3 / 0.000	1 / -	1 / -	1 / 0.623	- / -	1 / 0.623	1 / 0.783	1 / 0.799	1 / 0.816	1 / 0.938	- / -	10 / 3.959

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot							
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
In	3	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	10
Out	3	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	10

Footnotes:
⁽¹¹⁾ Increased funding throughout FYDP for Submarine Launched Decoy Buoy to reduce risk of counter-detection for operating submarines. Funding Profile for the Buoys are as follows: \$1.400M (FY17), \$0.694M (FY18), \$0.775M (FY19), \$0.810M (FY20), and \$1.241M (FY21).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog				Modification Number / Title: 9 / ML018 VA CLASS ES MODERNIZATION PATRIOT				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	2.726	-	2.726	2.955	0.361	0.368	-	-	6.410
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	2.726	-	2.726	2.955	0.361	0.368	-	-	6.410
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	2.726	-	2.726	2.955	0.361	0.368	-	-	6.410
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures Electronic Warfare Support (ES) Modernization upgrade of PATRIOT Phase B RADAR range finder for incorporation into the VIRGINIA CLASS Photonics Mast.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog						Modification Number / Title: 9 / ML018 VA CLASS ES MODERNIZATION PATRIOT			
Models of Systems Affected: VA PATRIOT				Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1:</i> ML018 VA CLASS ES MODERNIZATION PATRIOT													
B Kits													
Recurring													
1.1.1) VA PATRIOT - NonOrganic	9 / 0.000	2 / -	3 / -	2 / 2.379	- / -	2 / 2.379	2 / 2.424	- / -	- / -	- / -	- / -	18 / 4.803	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 2.379	- / -	- / 2.379	- / 2.424	- / -	- / -	- / -	- / -	- / 4.803	
<i>Subtotal: ML018 VA CLASS ES MODERNIZATION PATRIOT</i>	9 / 0.000	2 / -	3 / -	2 / 2.379	- / -	2 / 2.379	2 / 2.424	- / -	- / -	- / -	- / -	18 / 4.803	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 2.379	- / -	- / 2.379	- / 2.424	- / -	- / -	- / -	- / -	- / 4.803	
Installation													
<i>Modification Item 1 of 1:</i> ML018 VA CLASS ES MODERNIZATION PATRIOT													
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 0.347	- / -	- / 0.347	- / 0.531	- / 0.361	- / 0.368	- / -	- / -	- / 1.607	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	2.726	-	2.726	2.955	0.361	0.368	-	-	6.410	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 9 / ML018 VA CLASS ES MODERNIZATION PATRIOT

Modification Item 1 of 1: ML018 VA CLASS ES MODERNIZATION PATRIOT

Manufacturer Information

Manufacturer Name: VARIOUS	Manufacturer Location: VARIOUS
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 19

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2015	Mar 2016	Mar 2017	Mar 2018			
Delivery Dates	Oct 2016	Oct 2017	Oct 2018	Oct 2019			

Installation Information

Method of Implementation: AIT:: Installation Name: VA PATRIOT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	9 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	9 / -
FY 2015	- / -	- / -	- / -	2 / 0.347	- / -	2 / 0.347	- / -	- / -	- / -	- / -	- / -	2 / 0.347
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.531	- / -	- / -	- / -	- / -	3 / 0.531
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.361	- / -	- / -	- / -	2 / 0.361
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.368	- / -	- / -	2 / 0.368
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	9 / 0.000	- / -	- / -	2 / 0.347	- / -	2 / 0.347	3 / 0.531	2 / 0.361	2 / 0.368	- / -	- / -	18 / 1.607

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	9	-	-	-	-	-	-	-	-	2	-	-	-	3	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-
Out	9	-	-	-	-	-	-	-	-	2	-	-	-	3	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog				Modification Number / Title: 10 / ML020 AN/BLQ-10B (V)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	30.719	-	30.719	37.254	105.728	105.808	42.595	6.227	328.331
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	30.719	-	30.719	37.254	105.728	105.808	42.595	6.227	328.331
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	30.719	-	30.719	37.254	105.728	105.808	42.595	6.227	328.331

(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:

Procurement of AN/BLQ-10B(V) NRE and modernization kits for ES Modernization upgrades for all submarine platforms. The rapid proliferation of complex radar, communications and navigation equipment available to potential adversaries creates a need for sustained and significant improvements to submarine systems in order to maintain tactical ship safety and operational effectiveness. Commander Submarine Forces and the Submarine Tactical Requirements Group (STRG) raised EW primary mission area in FY12 to be the number one modernization requirement. In addition, each procurement aligns with hardware builds supporting platform level Submarine Warfare Federated Tactical Systems (SWFTS) interfaces.

FY17 AN/BLQ-10B(V) Next Generation Architecture (NGA)(TI-16) Backfit procurements reflect kits to be installed in conjunction with TI-16 modernization. AN/BLQ-10B(V)NGA (TI-16) Backfit procured jointly with NAVAIR and the US Army leveraging prior NAVAIR funded development and providing a common hardware set for synergistic software solutions to be developed and shared between all three programs.

FY19 procurement of the AN/BLQ-10B(V)NGA (TI-20) Backfit in conjunction with TI-20 modernization.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog						Modification Number / Title: 10 / ML020 AN/BLQ-10B (V)			
Models of Systems Affected: AN/BLQ-10				Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: ML020 AN/BLQ-10B (V)</i>													
B Kits													
Recurring													
1.1.1) AN/BLQ-10B(V) NGA (TI-16) Backfit Kits - NonOrganic	- / -	- / -	6 / -	6 / 15.228	- / -	6 / 15.228	11 / 28.446	7 / 18.466	7 / 18.837	- / -	- / -	37 / 80.977	
1.1.2) AN/BLQ-10B(V) NGA (TI-20) Backfit Kits - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 62.700	8 / 82.048	3 / 31.383	- / -	17 / 176.131	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 15.228	- / -	- / 15.228	- / 28.446	- / 81.166	- / 100.885	- / 31.383	- / -	- / 257.108	
<i>Subtotal: ML020 AN/BLQ-10B (V)</i>	- / -	- / -	6 / -	6 / 15.228	- / -	6 / 15.228	11 / 28.446	13 / 81.166	15 / 100.885	3 / 31.383	- / -	54 / 257.108	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 15.228	- / -	- / 15.228	- / 28.446	- / 81.166	- / 100.885	- / 31.383	- / -	- / 257.108	
Support (All Modification Items)													
2.1) NRE	- / -	- / -	- / -	- / 14.134	- / -	- / 14.134	- / 7.416	- / 21.959	- / 3.233	- / -	- / -	- / 46.742	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / 14.134	- / -	- / 14.134	- / 7.416	- / 21.959	- / 3.233	- / -	- / -	- / 46.742	
Installation													
<i>Modification Item 1 of 1: ML020 AN/BLQ-10B (V)</i>	- / 0.000	- / -	- / -	- / 1.357	- / -	- / 1.357	- / 1.392	- / 2.603	- / 1.690	- / 11.212	- / 6.227	- / 24.481	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 1.357	- / -	- / 1.357	- / 1.392	- / 2.603	- / 1.690	- / 11.212	- / 6.227	- / 24.481	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	30.719	-	30.719	37.254	105.728	105.808	42.595	6.227	328.331	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 10 / ML020 AN/BLQ-10B (V)
---	---	--

Modification Item 1 of 1: ML020 AN/BLQ-10B (V)

Manufacturer Information

Manufacturer Name: VARIOUS	Manufacturer Location: TBD
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020
Delivery Dates			Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021

Manufacturer Name: VARIOUS	Manufacturer Location: TBD
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 24

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates					Mar 2019	Mar 2020	Mar 2021
Delivery Dates					Mar 2021	Mar 2022	Mar 2023

Installation Information

Method of Implementation: AIT:: Installation Name: AN/BLQ-10B(V) NGA (TI-16) Backfit Kits

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	6 / 1.357	- / -	6 / 1.357	- / -	- / -	- / -	- / -	- / -	6 / 1.357
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.392	- / -	- / -	- / -	- / -	6 / 1.392
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 2.603	- / -	- / -	- / -	11 / 2.603
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 1.690	- / -	- / -	7 / 1.690
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 1.723	- / -	7 / 1.723
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	6 / 1.357	- / -	6 / 1.357	6 / 1.392	11 / 2.603	7 / 1.690	7 / 1.723	- / -	37 / 8.765

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	2	2	2	-	3	2	1	-	4	4	3	-	3	3	1	-	3	3	1	-	-
Out	-	-	-	-	-	-	-	-	-	2	2	2	-	3	2	1	-	4	4	3	-	3	3	1	-	3	3	1	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0840 / Sub Periscope, Imaging and Supt Equip Prog	Modification Number / Title: 10 / ML020 AN/BLQ-10B (V)
---	---	--

Modification Item 1 of 1: ML020 AN/BLQ-10B (V)

Installation Information

Method of Implementation: AIT:: Installation Name: AN/BLQ-10B(V) NGA (TI-20) Backfit Kits

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 9.489	6 / 9.489
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.291	8 / 1.291
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 4.936	3 / 4.936
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 9.489	17 / 15.716

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	1	11	17
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	1	11	17

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0900 / DDG Mod

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0204228N **Other Related Program Elements:** 0604567N, 0604307N

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,515.788	324.219	421.195	367.766	-	367.766	636.893	585.026	585.003	658.303	4,517.590	9,611.783
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,515.788	324.219	421.195	367.766	-	367.766	636.893	585.026	585.003	658.303	4,517.590	9,611.783
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,515.788	324.219	421.195	367.766	-	367.766	636.893	585.026	585.003	658.303	4,517.590	9,611.783

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	7.927	26.194	12.862	-	12.862	11.975	17.781	9.995	8.400	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2017 funding request was reduced by \$12.607 million to account for the availability of prior years execution balance.

The DDG Modernization Program is required to upgrade the in-service Flight I, II, and IIA DDG-51 Class ships in order to keep them relevant and affordable components of the Navy's Sea Power 21 Plan. The DDG Modernization Program is composed of a series of improvements in both the HM&E and Combat Systems (CS). The modernization installations are planned for each ship at approximately the midlife point for each hull. The quantity line represents the total DDG Modernization availabilities (HM&E and Combat Systems) started in each fiscal year. HM&E: 1-3-2-6-5-5-5 Combat System: 2-1-1-2-1-3-3. Large funding increase in FY 18 due to the increase in DDG Modernization installations from 2 in FY 17 to 6 in FY 18.

The HM&E modernization will be comprised of the technologies transitioned from SCN funded DDG 111/112 and those additional improvements required to support the expected service life of the DDG 51 Class. The upgrades will focus on Technologies that reduce workload and Total Ownership Costs (TOC) for the remaining hull life of each ship.

The centerpiece of the CS modernization is the Aegis Weapon System (AWS) upgrade. This upgrade will consist of the introduction of displays, computing equipment and the computer program required to implement Aegis Open Architecture (AOA) and replacement of the existing SPY-1D Signal Processor (SIGPRO) with the Multi-Mission Signal Processor. Selected warfighting improvements will also be installed in conjunction with the combat systems upgrade. This modernization program will provide a core modernization of the infrastructure "foundation" of each ship including the core engineering plan, core computing plan, and Combat Information Center (CIC). This modernization program will also provide an infrastructure foundation that will function as a landing zone for future warfighting capabilities.

[P40A / DM002 - LAND BASED ENGINEERING SITES]: Funds will be used to upgrade shore facilities for HM&E alterations providing risk reduction testing and provide for Combat System and HM&E training products.

[P40A / DM013 - CONJUNCTIVE ALTERATION DEFINITION AND INTEGRATION]: Procures Conjunctive Alteration Definition and Integration that includes equipment procurement, non-recurring and recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

[P40A / DMCA1 - DDG-51 MODERNIZATION PROGRAM CONGRESSIONAL ADD]: Description: DDG Modernization Congressional Add
Procures AN/SQQ-89 A(V)15 with Multi-Function Towed Array (MFTA) and other equipment for DDG Modernization Program that consist of hardware, software, system engineering, integrated logistics support, system test & evaluation, training, data, installation assistance teams, spare and repair parts, and program management for DDG 51 Class ships.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0900 / DDG Mod
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204228N	Other Related Program Elements: 0604567N, 0604307N
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / DMCA3 - COMMUNICATIONS UPGRADE FOR DDG MOD CONGRESSIONAL ADD]: Description: Communications Upgrade for DDG Modernization Congressional Add Procures communications upgrades for DDG Modernization Program that consist of hardware, software, system engineering, integrated logistics support, system test & evaluation, training, data, installation assistance teams, spare and repair parts, and program management for DDG 51 Class ships.</p> <p>[P40A / DMCA4 - SMART VALVE AUTOMATIC FIRE SUPPRESSION SYSTEM]: Description: Congressional Add for Smart Valve system. The Smart Valve is the enabling technology behind the Automatic Fire Suppression System (AFSS), which provides the sensing capability to detect ruptures in the fire main piping system that occur during a damage event; the ability to isolate damaged sections of the piping system; and the embedded "intelligence" to reconfigure the system to maintain firefighting capability where it is most needed without any operator intervention for DDG 51 Class ships.</p> <p>[P40A / DSA FOR FY14 AVAILABILITY]: Interchangeable Cruiser/Destroyer combat system equipment will be installed during the FY 14 DDG combat system availability. This equipment will not require procurement funding in FY12; however, will still require Design Services Allocation (DSA) and installation funding in FY 12-14.</p> <p>[P40A / DM6IN - INSTALLATION]: Funds are for installation of DDG Modernization equipment in support of the Fleet Modernization Program.</p> <p>[P40A / AIT & CONJUNCTIVE ALTS INSTALLATION]: Includes conjunctive alteration installation, installation support, future DSA, and AIT support.</p> <p>[P40A / MRG Procurement]: The contractor will engineer, manufacture, test and deliver a fully operational DDG 51 Class Main Reduction Gear (MRG). The MRG combines the input of two LM2500 engines to convert the high speed, low torque output suitable to drive the propulsion shafting, and the related support systems and equipment.</p> <p>[P3A / DM001 - DDG MODERNIZATION HME (GEDMS)]: Gigabit Ethernet Data Multiplexing System (GEDMS) replaces the obsolete copper machinery control LAN infrastructure with a new system based on the widely used Ethernet industry standard.</p> <p>[P3A - 2 / DM001 - DDG MODERNIZATION HME (MCS/DCS)]: Machinery Control System (MCS) replaces the obsolete control consoles while also delivering enhanced capability to the fleet through improved situational awareness and reconfigurable user stations. The new consoles use COTS-based computers which connect via VME-chassis technology. The VME architecture is expected to be supportable for the remaining service life of the ship and will enable computer upgrades within the chassis thereby mitigating future obsolescence concerns.</p> <p>[P3A - 3 / DM001 - DDG MODERNIZATION HME (DVSS)]: Digital Video Surveillance System (DVSS) is a network of video cameras which are integrated into the Machinery Control system. This system is primarily a watch-stander situational awareness tool which supplements the workload reduction benefits of the new MCS.</p> <p>[P3A - 4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)]: Shipwide Interior Wireless Communication System (SIWCS) - provides point-to-point coverage throughout the internal spaces of the ship as well as topside, topside-to-interior, line of sight ship-to-ship & line of sight ship-to-shore communications capabilities.</p> <p>[P3A - 5 / DM001 - DDG MODERNIZATION HME (IBNS)]: The Integrated Bridge & Navigation System (IBNS) replaces obsolete bridge consoles and introduces flexibility with how the pilot house is managed during navigation. The key benefit is the ability for operating with fewer watch-standers, reduced watch standard workloads, and improved safety of navigation.</p> <p>[P3A - 6 / DM003 - MK 160 MOD 15 GWS]: Procures MK 160 Mod 15 Gun Weapon System (GWS) that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p> <p>[P3A - 7 / DM004 - AWS UPGRADE]: Procures equipment for the AWS Upgrades that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0900 / DDG Mod
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204228N	Other Related Program Elements: 0604567N, 0604307N
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P3A - 8 / DM005 - MULTI-MISSION SIGPRO]: Procures Multi-Mission SIGPRO combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p> <p>[P3A - 9 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES]: Procures Multi-Mission Solid State Amplifier (SSA)/Continuous Wave Illumination (CWI) Microwave Tubes upgrades for DDG Modernization Program that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p> <p>[P3A - 10 / DM007 - SPY-1D TRANSMITTER UPGRADES]: Procures SPY-1D Transmitter Upgrades combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p> <p>[P3A - 11 / DM008 - MULTI-MISSION BMD CAPABILITY]: Procures Multi-Mission Ballistic Missile Defense (BMD) Capability combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p> <p>[P3A - 12 / DM009 - VLS UPGRADES]: Procures Vertical Launch System (VLS) Modifications, Evolved Sea Sparrow Missile VLS Modifications, SM3 Operability Heating Ventilation Air Conditioning (HVAC) and VLS MODS for SM3 Block 3 combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p> <p>[P3A - 13 / DM010 - FCS STAMO]: Procures Stabilized Master Oscillator (STAMO) combat systems that include equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p> <p>[P3A - 14 / DM011 - AN/SQQ-89 A(V15)]: Procures improved AN/SQQ-89(V)15 with Multi-Functional Towed Array (MFTA) combat systems to replace the installed MIL-STD AN/SQQ-89(V) that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p> <p>[P3A - 15 / DM012 - CEC]: Procures Cooperative Engagement Capability (CEC) combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0900 / DDG Mod

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0204228N **Other Related Program Elements:** 0604567N, 0604307N

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	DDG Mod			- / 475.833	- / 123.861	- / 105.384	- / 121.841	- / -	- / 121.841
P-3a	1 / DM001 - DDG MODERNIZATION HME (GEDMS) (TBD)			- / 131.067	- / 15.650	- / 33.869	- / 31.688	- / -	- / 31.688
P-3a	2 / DM001 - DDG MODERNIZATION HME (MCS/DCS) (TBD)			- / 195.331	- / 31.200	- / 67.250	- / 63.198	- / -	- / 63.198
P-3a	3 / DM001 - DDG MODERNIZATION HME (DVSS) (TBD)			- / 13.949	- / 2.377	- / 5.927	- / 5.068	- / -	- / 5.068
P-3a	4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS) (TBD)			- / 9.240	- / 0.969	- / 2.753	- / 2.097	- / -	- / 2.097
P-3a	5 / DM001 - DDG MODERNIZATION HME (IBNS) (TBD)			- / 92.222	- / 12.288	- / 29.623	- / 28.429	- / -	- / 28.429
P-3a	6 / DM003 - MK 160 MOD 15 GWS (TBD)			- / 30.793	- / 6.799	- / 9.504	- / 6.447	- / -	- / 6.447
P-3a	7 / DM004 - AWS UPGRADE (TBD)			- / 203.127	- / 69.911	- / 66.186	- / 51.440	- / -	- / 51.440
P-3a	8 / DM005 - MULTI-MISSION SIGPRO (TBD)			- / 127.440	- / 23.936	- / 38.224	- / 23.048	- / -	- / 23.048
P-3a	9 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES (TBD)			- / 6.761	- / 1.011	- / 2.058	- / 1.048	- / -	- / 1.048
P-3a	10 / DM007 - SPY-1D TRANSMITTER UPGRADES (TBD)			- / 31.647	- / 5.382	- / 10.148	- / 5.523	- / -	- / 5.523
P-3a	11 / DM008 - MULTI-MISSION BMD CAPABILITY (TBD)			- / 11.840	- / 1.680	- / 3.420	- / 1.741	- / -	- / 1.741
P-3a	12 / DM009 - VLS UPGRADES (TBD)			- / 56.126	- / 12.019	- / 17.061	- / 13.013	- / -	- / 13.013
P-3a	13 / DM010 - FCS STAMO (TBD)			- / 13.943	- / 0.500	- / 0.400	- / -	- / -	- / -
P-3a	14 / DM011 - AN/SQQ-89 A(V15) (TBD)			- / 81.760	- / 11.635	- / 26.955	- / 13.185	- / -	- / 13.185
P-3a	15 / DM012 - CEC (TBD)			- / 34.709	- / 5.001	- / 2.433	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 1,515.788	- / 324.219	- / 421.195	- / 367.766	- / -	- / 367.766

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	DDG Mod			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / DM001 - DDG MODERNIZATION HME (GEDMS) (TBD)			- / 47.810	- / 43.682	- / 41.511	- / 37.656	- / 339.405	- / 722.338
P-3a	2 / DM001 - DDG MODERNIZATION HME (MCS/DCS) (TBD)			- / 89.734	- / 86.433	- / 83.558	- / 75.471	- / 669.407	- / 1,361.582
P-3a	3 / DM001 - DDG MODERNIZATION HME (DVSS) (TBD)			- / 8.437	- / 7.611	- / 7.242	- / 6.659	- / 58.533	- / 115.803
P-3a	4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS) (TBD)			- / 2.383	- / 2.376	- / 1.621	- / 1.063	- / -	- / 22.502
P-3a	5 / DM001 - DDG MODERNIZATION HME (IBNS) (TBD)			- / 36.602	- / 34.998	- / 30.039	- / 27.311	- / 227.378	- / 518.890
P-3a	6 / DM003 - MK 160 MOD 15 GWS (TBD)			- / 14.939	- / 15.211	- / 14.188	- / 17.895	- / 129.924	- / 245.700
P-3a	7 / DM004 - AWS UPGRADE (TBD)			- / 112.127	- / 107.400	- / 122.487	- / 144.715	- / 1,492.450	- / 2,369.843
P-3a	8 / DM005 - MULTI-MISSION SIGPRO (TBD)			- / 58.795	- / 58.790	- / 48.092	- / 65.916	- / 456.883	- / 901.124
P-3a	9 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES (TBD)			- / 3.199	- / 3.257	- / 2.210	- / 3.375	- / 16.837	- / 39.756
P-3a	10 / DM007 - SPY-1D TRANSMITTER UPGRADES (TBD)			- / 10.740	- / 16.030	- / 6.232	- / 6.226	- / 0.240	- / 92.168
P-3a	11 / DM008 - MULTI-MISSION BMD CAPABILITY (TBD)			- / 5.317	- / 5.412	- / 3.673	- / 5.609	- / 27.981	- / 66.673
P-3a	12 / DM009 - VLS UPGRADES (TBD)			- / 25.573	- / 25.600	- / 23.037	- / 28.924	- / 219.207	- / 420.560

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0900 / DDG Mod

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0204228N **Other Related Program Elements:** 0604567N, 0604307N

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	13 / DM010 - FCS STAMO (TBD)			- / -	- / -	- / -	- / -	- / -	- / 14.843
P-3a	14 / DM011 - AN/SQQ-89 A(V15) (TBD)			- / 28.503	- / 25.650	- / 12.472	- / 11.128	- / 36.056	- / 247.344
P-3a	15 / DM012 - CEC (TBD)			- / -	- / -	- / -	- / -	- / -	- / 42.143
P-40	Total Gross/Weapon System Cost			- / 636.893	- / 585.026	- / 585.003	- / 658.303	- / 4,517.590	- / 9,611.783

*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.

--

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy																Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9						P-1 Line Item Number / Title: 0900 / DDG Mod						Aggregated Items Title: DDG Mod								
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) DM002 - LAND BASED ENGINEERING SITES																				
1.1) DM002 - Land Based Engineering Sites	A		-	-	168.427	-	-	7.149	-	-	6.767	-	-	6.889	-	-	-	-	-	6.889
Subtotal: 1) DM002 - LAND BASED ENGINEERING SITES			-	-	168.427	-	-	7.149	-	-	6.767	-	-	6.889	-	-	-	-	-	6.889
2) DM013 - CONJUNCTIVE ALTERATION DEFINITION AND INTEGRATION																				
2.1) DM013 - CONJUNCTIVE ALTERATION DEFINITION AND INTEGRATION	A		-	-	42.547	-	-	7.706	-	-	18.305	-	-	18.430	-	-	-	-	-	18.430
Subtotal: 2) DM013 - CONJUNCTIVE ALTERATION DEFINITION AND INTEGRATION			-	-	42.547	-	-	7.706	-	-	18.305	-	-	18.430	-	-	-	-	-	18.430
3) DMCA1 - DDG-51 MODERNIZATION PROGRAM CONGRESSIONAL ADD																				
3.1) DMCA1 - DDG-51 MODERNIZATION	A		-	-	5.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) SQQ-89A (V) W/ MFTA	A		-	-	25.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) DMCA1 - DDG-51 MODERNIZATION PROGRAM CONGRESSIONAL ADD			-	-	30.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4) DMCA3 - COMMUNICATIONS UPGRADE FOR DDG MOD CONGRESSIONAL ADD																				
4.1) DMCA3 - COMMUNICATIONS UPGRADE	A		-	-	3.120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) DMCA3 - COMMUNICATIONS UPGRADE FOR DDG MOD CONGRESSIONAL ADD			-	-	3.120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5) DMCA4 - SMART VALVE AUTOMATIC FIRE SUPPRESSION SYSTEM																				
5.1) SMART VALVE EQUIPMENT	A		-	-	2.480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) DMCA4 - SMART VALVE AUTOMATIC FIRE SUPPRESSION SYSTEM			-	-	2.480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6) DSA FOR FY14 AVAILABILITY																				
6.1) DSA FOR FY14 AVAILABILITY	A		-	-	39.067	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) DSA FOR FY14 AVAILABILITY			-	-	39.067	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7) DM6IN - INSTALLATION																				

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Aggregated Items Title: DDG Mod
---	--	---

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
7.1) AIT & CONJUNCTIVE ALTS INSTALLATION ⁽¹⁾	A		-	-	190.192	-	-	109.006	-	-	65.312	-	-	96.522	-	-	-	-	-	96.522
Subtotal: 7) DM6IN - INSTALLATION			-	-	190.192	-	-	109.006	-	-	65.312	-	-	96.522	-	-	-	-	-	96.522
8) MRG Procurement																				
8.1) MRG Equipment	A		-	-	-	-	-	-	15,000K	1	15,000	-	-	-	-	-	-	-	-	-
Subtotal: 8) MRG Procurement			-	-	0.000	-	-	-	-	-	15.000	-	-	-	-	-	-	-	-	-
Total			-	-	475.833	-	-	123.861	-	-	105.384	-	-	121.841	-	-	-	-	-	121.841

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

Footnotes:

⁽¹⁾ Includes conjunctive alteration installation, installation support, future DSA, and AIT support. Large increase in AIT & Conjunctive Alts Installation from 2016 to 2017 due to FY 16's cost capturing DDG 61's CSSQT DSA cost whereas, FY17 captures DDG 61's CSSQT, 80 CSSQT DSA, as well as AMT for DDG 61 and DDG 80.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod				Modification Number / Title: 1 / DM001 - DDG MODERNIZATION HME (GEDMS)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	131.067	15.650	33.869	31.688	-	31.688	47.810	43.682	41.511	37.656	339.405	722.338
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	131.067	15.650	33.869	31.688	-	31.688	47.810	43.682	41.511	37.656	339.405	722.338
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	131.067	15.650	33.869	31.688	-	31.688	47.810	43.682	41.511	37.656	339.405	722.338
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Gigabit Ethernet Data Multiplexing System (GEDMS) replaces the obsolete copper machinery control LAN infrastructure with a new system based on the widely used Ethernet industry standard.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 1 / DM001 - DDG MODERNIZATION HME (GEDMS)			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs: 0604567N					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (GEDMS)</i>													
B Kits													
Recurring													
1.1.1) GEDMS Equipment - NonOrganic ⁽²⁾	16 / 65.060	1 / 2.676	4 / 10.898	3 / 8.321	- / -	3 / 8.321	2 / 5.647	2 / 5.749	- / -	- / -	- / -	28 / 98.351	
1.1.2) GEDMS EQUIPMENT FLIGHT IIA - NonOrganic ⁽³⁾	- / -	1 / 1.285	2 / 2.616	2 / 2.663	- / -	2 / 2.663	3 / 4.066	3 / 4.139	3 / 4.213	3 / 4.289	14 / 22.717	31 / 45.988	
<i>Subtotal: Recurring</i>	- / 65.060	- / 3.961	- / 13.514	- / 10.984	- / -	- / 10.984	- / 9.713	- / 9.888	- / 4.213	- / 4.289	- / 22.717	- / 144.339	
<i>Subtotal: DM001 - DDG MODERNIZATION HME (GEDMS)</i>	16 / 65.060	2 / 3.961	6 / 13.514	5 / 10.984	- / -	5 / 10.984	5 / 9.713	5 / 9.888	3 / 4.213	3 / 4.289	14 / 22.717	59 / 144.339	
<i>Subtotal: Procurement, All Modification Items</i>	- / 65.060	- / 3.961	- / 13.514	- / 10.984	- / -	- / 10.984	- / 9.713	- / 9.888	- / 4.213	- / 4.289	- / 22.717	- / 144.339	
Support (All Modification Items)													
2.1) GEDMS Engineering Services	- / 18.585	- / 3.197	- / 4.623	- / 4.814	- / -	- / 4.814	- / 4.950	- / 5.039	- / 5.130	- / 5.222	- / 39.284	- / 90.844	
<i>Subtotal: Support</i>	- / 18.585	- / 3.197	- / 4.623	- / 4.814	- / -	- / 4.814	- / 4.950	- / 5.039	- / 5.130	- / 5.222	- / 39.284	- / 90.844	
Installation													
<i>Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (GEDMS)</i>	- / 47.422	- / 8.492	- / 15.732	- / 15.890	- / -	- / 15.890	- / 33.147	- / 28.755	- / 32.168	- / 28.145	- / 277.404	- / 487.155	
<i>Subtotal: Installation</i>	- / 47.422	- / 8.492	- / 15.732	- / 15.890	- / -	- / 15.890	- / 33.147	- / 28.755	- / 32.168	- / 28.145	- / 277.404	- / 487.155	
Total													
Total Cost (Procurement + Support + Installation)	131.067	15.650	33.869	31.688	-	31.688	47.810	43.682	41.511	37.656	339.405	722.338	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 1 / DM001 - DDG MODERNIZATION HME (GEDMS)

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (GEDMS)

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Anaheim, CA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 16

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Oct 2015	Jun 2016	Aug 2017	Jul 2018	Sep 2019	May 2020	Sep 2021
Delivery Dates	Feb 2017	Oct 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation: SHIPYARD:: Installation Name: GEDMS Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	12 / 47.422	1 / 7.987	3 / 11.128	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	16 / 66.537
FY 2015	- / -	- / 0.267	- / 1.562	1 / 2.158	- / -	1 / 2.158	- / -	- / -	- / -	- / -	- / -	1 / 3.987
FY 2016	- / -	- / -	- / 0.996	- / 5.907	- / -	- / 5.907	4 / 16.665	- / -	- / -	- / -	- / -	4 / 23.568
FY 2017	- / -	- / -	- / -	- / 0.649	- / -	- / 0.649	- / 3.636	3 / 10.610	- / -	- / -	- / -	3 / 14.895
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.604	- / 3.382	2 / 9.354	- / -	- / -	2 / 13.340
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.616	- / 3.450	2 / 9.516	- / -	2 / 13.582
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	12 / 47.422	1 / 8.254	3 / 13.686	1 / 8.714	- / -	1 / 8.714	4 / 20.905	3 / 14.608	2 / 12.804	2 / 9.516	- / -	28 / 135.909

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	12	-	1	-	-	-	2	1	-	-	-	1	-	1	-	1	2	1	-	-	2	-	-	1	1	-	1	-	1	-	-
Out	10	1	1	-	-	-	1	1	2	-	1	-	-	-	-	-	-	1	1	1	1	2	-	-	-	2	1	-	1	1	1

Method of Implementation: [none specified]:: Installation Name: GEDMS EQUIPMENT FLIGHT IIA

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 1 / DM001 - DDG MODERNIZATION HME (GEDMS)

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (GEDMS)

Installation Information

Method of Implementation: [none specified]:: Installation Name: GEDMS EQUIPMENT FLIGHT IIA

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / 0.238	- / 1.547	1 / 3.684	- / -	1 / 3.684	- / -	- / -	- / -	- / -	- / -	1 / 5.469
FY 2016	- / -	- / -	- / 0.499	- / 2.954	- / -	- / 2.954	2 / 8.333	- / -	- / -	- / -	- / -	2 / 11.786
FY 2017	- / -	- / -	- / -	- / 0.538	- / -	- / 0.538	- / 3.012	2 / 8.310	- / -	- / -	- / -	2 / 11.860
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.897	- / 5.027	3 / 13.921	- / -	- / -	3 / 19.845
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.810	- / 4.543	3 / 12.768	- / -	3 / 18.121
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.900	- / 5.034	3 / 13.938	3 / 19.872
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.827	3 / 17.052	3 / 17.879
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 246.414	14 / 246.414
Total	- / -	- / 0.238	- / 2.046	1 / 7.176	- / -	1 / 7.176	2 / 12.242	2 / 14.147	3 / 19.364	3 / 18.629	20 / 277.404	31 / 351.246

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	-	1	1	-	-	1	1	-	1	-	2	-	1	20	31
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	1	-	2	-	-	1	-	-	24	31

Footnotes:

(2) Engineering Services line includes both Flight I/II and Flight IIA ships. Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

(3) Due to ship specific differences, the unit cost for a Flight IIA ship is less than that for a Flight I/II ship. DDG 111 & 112 received GEDMS during new construction. Large funding increase in FY 18 due to increase in DDG Modernization installations from 2 in FY 17 to 6 in FY 18.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod			Modification Number / Title: 2 / DM001 - DDG MODERNIZATION HME (MCS/DCS)					

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	195.331	31.200	67.250	63.198	-	63.198	89.734	86.433	83.558	75.471	669.407	1,361.582
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	195.331	31.200	67.250	63.198	-	63.198	89.734	86.433	83.558	75.471	669.407	1,361.582
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	195.331	31.200	67.250	63.198	-	63.198	89.734	86.433	83.558	75.471	669.407	1,361.582
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Machinery Control System (MCS) replaces the obsolete control consoles while also delivering enhanced capability to the fleet through improved situational awareness and reconfigurable user stations. The new consoles use COTS-based computers which connect via VME-chassis technology. The VME architecture is expected to be supportable for the remaining service life of the ship and will enable computer upgrades within the chassis thereby mitigating future obsolescence concerns.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 2 / DM001 - DDG MODERNIZATION HME (MCS/DCS)			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs: 0604567N					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> DM001 - DDG MODERNIZATION HME (MCS/DCS)													
B Kits													
Recurring													
1.1.1) MCS/DCS EQUIPMENT - NonOrganic ⁽⁴⁾	16 / 59.704	2 / 8.406	6 / 25.671	5 / 21.936	- / -	5 / 21.936	5 / 22.331	5 / 22.815	3 / 13.869	3 / 14.033	14 / 84.551	59 / 273.316	
<i>Subtotal: Recurring</i>	- / 59.704	- / 8.406	- / 25.671	- / 21.936	- / -	- / 21.936	- / 22.331	- / 22.815	- / 13.869	- / 14.033	- / 84.551	- / 273.316	
Non-Recurring													
1.2.1) MCS/DCS 1ST ARTICLE & NRE - Organic	- / 8.643	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.643	
<i>Subtotal: Non-Recurring</i>	- / 8.643	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.643	
<i>Subtotal: DM001 - DDG MODERNIZATION HME (MCS/DCS)</i>	16 / 68.347	2 / 8.406	6 / 25.671	5 / 21.936	- / -	5 / 21.936	5 / 22.331	5 / 22.815	3 / 13.869	3 / 14.033	14 / 84.551	59 / 281.959	
<i>Subtotal: Procurement, All Modification Items</i>	- / 68.347	- / 8.406	- / 25.671	- / 21.936	- / -	- / 21.936	- / 22.331	- / 22.815	- / 13.869	- / 14.033	- / 84.551	- / 281.959	
Support (All Modification Items)													
2.1) MCS/DCS ENGINEERING SERVICES	- / 37.093	- / 7.700	- / 12.836	- / 12.100	- / -	- / 12.100	- / 11.472	- / 11.679	- / 11.889	- / 12.103	- / 91.044	- / 207.916	
<i>Subtotal: Support</i>	- / 37.093	- / 7.700	- / 12.836	- / 12.100	- / -	- / 12.100	- / 11.472	- / 11.679	- / 11.889	- / 12.103	- / 91.044	- / 207.916	
Installation													
<i>Modification Item 1 of 1:</i> DM001 - DDG MODERNIZATION HME (MCS/DCS)	- / 89.891	- / 15.094	- / 28.743	- / 29.162	- / -	- / 29.162	- / 55.931	- / 51.939	- / 57.800	- / 49.335	- / 493.812	- / 871.707	
<i>Subtotal: Installation</i>	- / 89.891	- / 15.094	- / 28.743	- / 29.162	- / -	- / 29.162	- / 55.931	- / 51.939	- / 57.800	- / 49.335	- / 493.812	- / 871.707	
Total													
Total Cost (Procurement + Support + Installation)	195.331	31.200	67.250	63.198	-	63.198	89.734	86.433	83.558	75.471	669.407	1,361.582	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 2 / DM001 - DDG MODERNIZATION HME (MCS/DCS)

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (MCS/DCS)

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Orlando, FL
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 16

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Oct 2015	Jun 2016	Aug 2017	Jul 2018	Sep 2019	May 2020	Sep 2021
Delivery Dates	Feb 2017	Oct 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: MCS/DCS EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	12 / 89.891	1 / 14.103	3 / 19.180	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	16 / 123.174
FY 2015	- / -	- / 10.991	- / 6.842	2 / 8.912	- / -	2 / 8.912	- / -	- / -	- / -	- / -	- / -	2 / 16.745
FY 2016	- / -	- / -	- / 2.721	- / 17.920	- / -	- / 17.920	6 / 38.333	- / -	- / -	- / -	- / -	6 / 58.974
FY 2017	- / -	- / -	- / -	- / 2.330	- / -	- / 2.330	- / 14.650	5 / 30.610	- / -	- / -	- / -	5 / 47.590
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.948	- / 18.525	5 / 38.414	- / -	- / -	5 / 59.887
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.804	- / 17.619	- / 11.767	5 / 36.596	- / -	5 / 57.019
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.767	- / 11.091	3 / 22.998	3 / 35.856
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.648	3 / 31.830	3 / 33.478
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 438.984	14 / 438.984
Total	12 / 89.891	1 / 15.094	3 / 28.743	2 / 29.162	- / -	2 / 29.162	6 / 55.931	5 / 51.939	5 / 57.800	5 / 49.335	20 / 493.812	59 / 871.707

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	12	-	1	-	-	-	2	1	-	-	-	1	1	-	1	2	1	2	2	1	-	2	1	1	2	1	-	3	-	2	20	59
Out	10	1	1	-	-	-	1	1	2	-	-	-	-	-	-	1	-	1	1	2	2	1	3	-	2	-	2	2	-	1	25	59

Footnotes:
⁽⁴⁾ Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. Large funding increase in FY 18 due to increase in DDG Modernization installations from 2 in FY 17 vice 6 in FY 18.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod				Modification Number / Title: 3 / DM001 - DDG MODERNIZATION HME (DVSS)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	13.949	2.377	5.927	5.068	-	5.068	8.437	7.611	7.242	6.659	58.533	115.803
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	13.949	2.377	5.927	5.068	-	5.068	8.437	7.611	7.242	6.659	58.533	115.803
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	13.949	2.377	5.927	5.068	-	5.068	8.437	7.611	7.242	6.659	58.533	115.803
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Digital Video Surveillance System (DVSS) is a network of video cameras which are integrated into the Machinery Control System. This system is primarily a watch-stander situational awareness tool which supplements the workload reduction benefits of the new MCS.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 3 / DM001 - DDG MODERNIZATION HME (DVSS)			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs: 0604567N					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> DM001 - DDG MODERNIZATION HME (DVSS)													
B Kits													
Recurring													
1.1.1) DVSS Equipment - NonOrganic ⁽⁵⁾	16 / 4.958	2 / 0.988	6 / 3.018	5 / 2.560	- / -	5 / 2.560	5 / 2.606	5 / 2.653	3 / 1.621	3 / 1.650	14 / 9.940	59 / 29.994	
<i>Subtotal: Recurring</i>	- / 4.958	- / 0.988	- / 3.018	- / 2.560	- / -	- / 2.560	- / 2.606	- / 2.653	- / 1.621	- / 1.650	- / 9.940	- / 29.994	
Non-Recurring													
1.2.1) DVSS 1st Article & NRE - Organic	- / 0.477	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.477	
<i>Subtotal: Non-Recurring</i>	- / 0.477	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.477	
<i>Subtotal: DM001 - DDG MODERNIZATION HME (DVSS)</i>	16 / 5.435	2 / 0.988	6 / 3.018	5 / 2.560	- / -	5 / 2.560	5 / 2.606	5 / 2.653	3 / 1.621	3 / 1.650	14 / 9.940	59 / 30.471	
<i>Subtotal: Procurement, All Modification Items</i>	- / 5.435	- / 0.988	- / 3.018	- / 2.560	- / -	- / 2.560	- / 2.606	- / 2.653	- / 1.621	- / 1.650	- / 9.940	- / 30.471	
Installation													
<i>Modification Item 1 of 1:</i> DM001 - DDG MODERNIZATION HME (DVSS)	- / 8.514	- / 1.389	- / 2.909	- / 2.508	- / -	- / 2.508	- / 5.831	- / 4.958	- / 5.621	- / 5.009	- / 48.593	- / 85.332	
<i>Subtotal: Installation</i>	- / 8.514	- / 1.389	- / 2.909	- / 2.508	- / -	- / 2.508	- / 5.831	- / 4.958	- / 5.621	- / 5.009	- / 48.593	- / 85.332	
Total													
Total Cost (Procurement + Support + Installation)	13.949	2.377	5.927	5.068	-	5.068	8.437	7.611	7.242	6.659	58.533	115.803	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 3 / DM001 - DDG MODERNIZATION HME (DVSS)

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (DVSS)

Manufacturer Information

Manufacturer Name: NSWC SSES	Manufacturer Location: Philadelphia, PA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 16

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Oct 2015	Jun 2016	Aug 2017	Jul 2018	Sep 2019	May 2020	Sep 2021
Delivery Dates	Feb 2017	Oct 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: DVSS Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	12 / 8.514	1 / 1.300	3 / 2.215	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	16 / 12.029
FY 2015	- / -	- / 0.089	- / 0.430	2 / 1.071	- / -	2 / 1.071	- / -	- / -	- / -	- / -	- / -	2 / 1.590
FY 2016	- / -	- / -	- / 0.264	- / 1.227	- / -	- / 1.227	6 / 4.659	- / -	- / -	- / -	- / -	6 / 6.150
FY 2017	- / -	- / -	- / -	- / 0.210	- / -	- / 0.210	- / 0.907	5 / 3.544	- / -	- / -	- / -	5 / 4.661
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.265	- / 1.164	5 / 4.355	- / -	- / -	5 / 5.784
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.250	- / 1.107	5 / 4.163	- / -	5 / 5.520
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.159	- / 0.698	3 / 2.608	3 / 3.465
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.148	3 / 3.103	3 / 3.251
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 42.882	14 / 42.882
Total	12 / 8.514	1 / 1.389	3 / 2.909	2 / 2.508	- / -	2 / 2.508	6 / 5.831	5 / 4.958	5 / 5.621	5 / 5.009	20 / 48.593	59 / 85.332

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	12	-	1	-	-	-	2	1	-	-	-	1	1	-	1	2	1	2	2	1	-	2	1	1	2	1	-	3	-	2	20	59
Out	10	1	1	-	-	-	1	1	2	-	-	-	-	-	-	1	-	1	1	2	2	1	3	-	2	-	2	2	-	1	25	59

Footnotes:

⁽⁵⁾ Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. Large funding increase in FY 18 due to increase in DDG Modernization installations from 2 in FY 17 vice 6 in FY 18.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod				Modification Number / Title: 4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	9.240	0.969	2.753	2.097	-	2.097	2.383	2.376	1.621	1.063	-	22.502
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	9.240	0.969	2.753	2.097	-	2.097	2.383	2.376	1.621	1.063	-	22.502
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	9.240	0.969	2.753	2.097	-	2.097	2.383	2.376	1.621	1.063	-	22.502
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Shipwide Interior Wireless Communication System (SIWCS) - provides point-to-point coverage throughout the internal spaces of the ship as well as topside, topside-to-interior, line of sight ship-to-ship & line of sight ship-to-shore communications capabilities. All FLT IIAs (DDG 79+) have a version of SIWCS installed.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs: 0604567N
---	-------------------------------	--

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)												
B Kits												
Recurring												
1.1.1) Wireless Communications Equipment - NonOrganic ⁽⁶⁾	12 / 4.435	- / -	3 / 1.278	3 / 1.301	- / -	3 / 1.301	2 / 0.883	2 / 0.899	- / -	- / -	- / -	22 / 8.796
<i>Subtotal: Recurring</i>	- / 4.435	- / -	- / 1.278	- / 1.301	- / -	- / 1.301	- / 0.883	- / 0.899	- / -	- / -	- / -	- / 8.796
<i>Subtotal: DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)</i>	12 / 4.435	- / -	3 / 1.278	3 / 1.301	- / -	3 / 1.301	2 / 0.883	2 / 0.899	- / -	- / -	- / -	22 / 8.796
<i>Subtotal: Procurement, All Modification Items</i>	- / 4.435	- / -	- / 1.278	- / 1.301	- / -	- / 1.301	- / 0.883	- / 0.899	- / -	- / -	- / -	- / 8.796
Installation												
<i>Modification Item 1 of 1:</i> DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)	- / 4.805	- / 0.969	- / 1.475	- / 0.796	- / -	- / 0.796	- / 1.500	- / 1.477	- / 1.621	- / 1.063	- / -	- / 13.706
<i>Subtotal: Installation</i>	- / 4.805	- / 0.969	- / 1.475	- / 0.796	- / -	- / 0.796	- / 1.500	- / 1.477	- / 1.621	- / 1.063	- / -	- / 13.706
Total												
Total Cost (Procurement + Support + Installation)	9.240	0.969	2.753	2.097	-	2.097	2.383	2.376	1.621	1.063	-	22.502

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 4 / DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (WIRELESS COMMUNICATIONS)

Manufacturer Information

Manufacturer Name: Spawar Systems Center Atlantic	Manufacturer Location: Charleston, SC
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 16

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Aug 2016	Feb 2018	Sep 2018	Sep 2019		
Delivery Dates		Dec 2017	Jun 2019	Jan 2020	Jan 2021		

Installation Information

Method of Implementation: [none specified]:: Installation Name: Wireless Communications Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	9 / 4.805	- / 0.969	3 / 1.316	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	12 / 7.090
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / 0.159	- / 0.730	- / -	- / 0.730	3 / 0.977	- / -	- / -	- / -	- / -	3 / 1.866
FY 2017	- / -	- / -	- / -	- / 0.066	- / -	- / 0.066	- / 0.439	3 / 0.835	- / -	- / -	- / -	3 / 1.340
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.084	- / 0.558	2 / 1.063	- / -	- / -	2 / 1.705
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.084	- / 0.558	2 / 1.063	- / -	2 / 1.705
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	9 / 4.805	- / 0.969	3 / 1.475	- / 0.796	- / -	- / 0.796	3 / 1.500	3 / 1.477	2 / 1.621	2 / 1.063	- / -	22 / 13.706

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	9	-	-	-	-	-	2	1	-	-	-	-	-	1	-	1	1	-	-	-	3	-	-	1	1	-	1	-	1	-	-
Out	8	1	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	1	1	1	-	1	-	-	-	3	1	-	1	1	-

Footnotes:

⁽⁶⁾ All flight I & II require SIWCS with the exception of DDGs 53-56 and 63 (previously installed). All flight IIA's have a version of SIWCS installed. Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod			Modification Number / Title: 5 / DM001 - DDG MODERNIZATION HME (IBNS)					

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	92.222	12.288	29.623	28.429	-	28.429	36.602	34.998	30.039	27.311	227.378	518.890
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	92.222	12.288	29.623	28.429	-	28.429	36.602	34.998	30.039	27.311	227.378	518.890
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	92.222	12.288	29.623	28.429	-	28.429	36.602	34.998	30.039	27.311	227.378	518.890

(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 Integrated Bridge & Navigation System (IBNS) replaces obsolete bridge consoles and introduces flexibility with how the pilot house is managed during navigation. The key benefit is the ability for operating with fewer watch-standers, reduced watch standard workloads, and improved safety of navigation.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 5 / DM001 - DDG MODERNIZATION HME (IBNS)			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs: 0604567N					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> DM001 - DDG MODERNIZATION HME (IBNS)													
B Kits													
Recurring													
1.1.1) IBNS Equipment - NonOrganic ⁽⁷⁾	16 / 49.149	2 / 6.323	6 / 19.309	5 / 16.381	- / -	5 / 16.381	5 / 16.675	5 / 16.976	3 / 10.369	3 / 10.555	14 / 63.597	59 / 209.334	
<i>Subtotal: Recurring</i>	- / 49.149	- / 6.323	- / 19.309	- / 16.381	- / -	- / 16.381	- / 16.675	- / 16.976	- / 10.369	- / 10.555	- / 63.597	- / 209.334	
Non-Recurring													
1.2.1) IBNS 1st Article & NRE - Organic	- / 4.186	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.186	
<i>Subtotal: Non-Recurring</i>	- / 4.186	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.186	
<i>Subtotal: DM001 - DDG MODERNIZATION HME (IBNS)</i>	16 / 53.335	2 / 6.323	6 / 19.309	5 / 16.381	- / -	5 / 16.381	5 / 16.675	5 / 16.976	3 / 10.369	3 / 10.555	14 / 63.597	59 / 213.520	
<i>Subtotal: Procurement, All Modification Items</i>	- / 53.335	- / 6.323	- / 19.309	- / 16.381	- / -	- / 16.381	- / 16.675	- / 16.976	- / 10.369	- / 10.555	- / 63.597	- / 213.520	
Support (All Modification Items)													
2.1) IBNS Engineering Services	- / 4.557	- / 0.703	- / 1.165	- / 1.968	- / -	- / 1.968	- / 1.468	- / 1.403	- / 1.292	- / 1.177	- / 6.449	- / 20.182	
<i>Subtotal: Support</i>	- / 4.557	- / 0.703	- / 1.165	- / 1.968	- / -	- / 1.968	- / 1.468	- / 1.403	- / 1.292	- / 1.177	- / 6.449	- / 20.182	
Installation													
<i>Modification Item 1 of 1:</i> DM001 - DDG MODERNIZATION HME (IBNS)	- / 34.330	- / 5.262	- / 9.149	- / 10.080	- / -	- / 10.080	- / 18.459	- / 16.619	- / 18.378	- / 15.579	- / 157.332	- / 285.188	
<i>Subtotal: Installation</i>	- / 34.330	- / 5.262	- / 9.149	- / 10.080	- / -	- / 10.080	- / 18.459	- / 16.619	- / 18.378	- / 15.579	- / 157.332	- / 285.188	
Total													
Total Cost (Procurement + Support + Installation)	92.222	12.288	29.623	28.429	-	28.429	36.602	34.998	30.039	27.311	227.378	518.890	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 5 / DM001 - DDG MODERNIZATION HME (IBNS)

Modification Item 1 of 1: DM001 - DDG MODERNIZATION HME (IBNS)

Manufacturer Information

Manufacturer Name: Northrop Grumman Sperry	Manufacturer Location: Charlottesville, VA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 16

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Oct 2015	Jun 2016	Aug 2017	Jul 2018	Sep 2019	May 2020	Sep 2021
Delivery Dates	Feb 2017	Oct 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: IBNS Equipment

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	12 / 34.330	1 / 4.948	3 / 5.916	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	16 / 45.194
FY 2015	- / -	- / 0.314	- / 2.305	2 / 2.777	- / -	2 / 2.777	- / -	- / -	- / -	- / -	- / -	2 / 5.396
FY 2016	- / -	- / -	- / 0.928	- / 16.567	- / -	- / 16.567	6 / 12.597	- / -	- / -	- / -	- / -	6 / 20.092
FY 2017	- / -	- / -	- / -	- / 0.736	- / -	- / 0.736	- / 4.929	5 / 9.499	- / -	- / -	- / -	5 / 15.164
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.933	- / 6.235	5 / 11.893	- / -	- / -	5 / 19.061
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.885	- / 15.925	5 / 11.325	- / -	5 / 18.135
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.560	- / 3.731	3 / 7.121	3 / 11.412
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.523	3 / 10.141	3 / 10.664
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 140.070	14 / 140.070
Total	12 / 34.330	1 / 5.262	3 / 9.149	2 / 10.080	- / -	2 / 10.080	6 / 18.459	5 / 16.619	5 / 18.378	5 / 15.579	20 / 157.332	59 / 285.188

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	12	-	1	-	-	-	2	1	-	-	1	1	-	1	2	1	2	2	1	-	2	1	1	2	1	-	3	-	2	20	59
Out	10	1	1	-	-	-	1	1	2	-	-	-	-	-	1	-	1	1	2	2	1	3	-	2	-	2	2	-	1	25	59

Footnotes:
⁽⁷⁾ Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages. Large funding increase in FY 18 due to increase in DDG Modernization installations from 2 in FY 17 vice 6 in FY 18.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 6 / DM003 - MK 160 MOD 15 GWS
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	30.793	6.799	9.504	6.447	-	6.447	14.939	15.211	14.188	17.895	129.924	245.700
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	30.793	6.799	9.504	6.447	-	6.447	14.939	15.211	14.188	17.895	129.924	245.700
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	30.793	6.799	9.504	6.447	-	6.447	14.939	15.211	14.188	17.895	129.924	245.700

(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:

Procures MK 160 Mod 15 Gun Weapon System (GWS) that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 6 / DM003 - MK 160 MOD 15 GWS			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> DM003 - MK 160 MOD 15 GWS													
B Kits													
Recurring													
1.1.1) MK 160 MOD 15 GWS EQUIPMENT - NonOrganic ⁽⁸⁾	6 / 17.749	1 / 3.212	2 / 6.540	1 / 3.329	- / -	1 / 3.329	3 / 10.167	3 / 10.350	2 / 7.024	3 / 10.725	14 / 53.506	35 / 122.602	
<i>Subtotal: Recurring</i>	- / 17.749	- / 3.212	- / 6.540	- / 3.329	- / -	- / 3.329	- / 10.167	- / 10.350	- / 7.024	- / 10.725	- / 53.506	- / 122.602	
<i>Subtotal: DM003 - MK 160 MOD 15 GWS</i>	6 / 17.749	1 / 3.212	2 / 6.540	1 / 3.329	- / -	1 / 3.329	3 / 10.167	3 / 10.350	2 / 7.024	3 / 10.725	14 / 53.506	35 / 122.602	
<i>Subtotal: Procurement, All Modification Items</i>	- / 17.749	- / 3.212	- / 6.540	- / 3.329	- / -	- / 3.329	- / 10.167	- / 10.350	- / 7.024	- / 10.725	- / 53.506	- / 122.602	
Support (All Modification Items)													
2.1) ENGINEERING SERVICES	- / 9.388	- / 1.754	- / 1.673	- / 1.703	- / -	- / 1.703	- / 2.549	- / 2.833	- / 3.488	- / 3.550	- / 20.089	- / 47.027	
<i>Subtotal: Support</i>	- / 9.388	- / 1.754	- / 1.673	- / 1.703	- / -	- / 1.703	- / 2.549	- / 2.833	- / 3.488	- / 3.550	- / 20.089	- / 47.027	
Installation													
<i>Modification Item 1 of 1:</i> DM003 - MK 160 MOD 15 GWS	- / 3.656	- / 1.833	- / 1.291	- / 1.415	- / -	- / 1.415	- / 2.223	- / 2.028	- / 3.676	- / 3.620	- / 56.329	- / 76.071	
<i>Subtotal: Installation</i>	- / 3.656	- / 1.833	- / 1.291	- / 1.415	- / -	- / 1.415	- / 2.223	- / 2.028	- / 3.676	- / 3.620	- / 56.329	- / 76.071	
Total													
Total Cost (Procurement + Support + Installation)	30.793	6.799	9.504	6.447	-	6.447	14.939	15.211	14.188	17.895	129.924	245.700	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 6 / DM003 - MK 160 MOD 15 GWS

Modification Item 1 of 1: DM003 - MK 160 MOD 15 GWS

Manufacturer Information

Manufacturer Name: VARIOUS	Manufacturer Location: VARIOUS
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Sep 2015	Jun 2016	Jun 2017	May 2018	Jul 2019	Mar 2020	Jul 2021
Delivery Dates	Mar 2016	Dec 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: MK 160 MOD 15 GWS EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	3 / 3.656	2 / 1.783	1 / 0.874	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 6.313
FY 2015	- / -	- / 0.050	- / 0.312	1 / 0.756	- / -	1 / 0.756	- / -	- / -	- / -	- / -	- / -	1 / 1.118
FY 2016	- / -	- / -	- / 0.105	- / 0.596	- / -	- / 0.596	2 / 1.721	- / -	- / -	- / -	- / -	2 / 2.422
FY 2017	- / -	- / -	- / -	- / 0.063	- / -	- / 0.063	- / 0.334	1 / 0.954	- / -	- / -	- / -	1 / 1.351
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.168	- / 0.897	3 / 2.593	- / -	- / -	3 / 3.658
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.177	- / 0.946	3 / 2.718	- / -	3 / 3.841
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.137	- / 0.725	2 / 2.054	2 / 2.916
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.177	3 / 3.665	3 / 3.842
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 50.610	14 / 50.610
Total	3 / 3.656	2 / 1.833	1 / 1.291	1 / 1.415	- / -	1 / 1.415	2 / 2.223	1 / 2.028	3 / 3.676	3 / 3.620	19 / 56.329	35 / 76.071

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	3	-	-	1	1	-	-	-	1	-	-	-	1	-	-	2	-	-	-	1	-	-	1	1	-	1	-	2	-	1	19	35
Out	2	1	-	-	-	-	-	-	2	-	-	-	1	-	-	-	1	-	2	-	-	-	-	2	-	-	1	-	-	23	35	

Footnotes:

(8) Interchangeable Cruiser/Destroyer combat system equipment is being installed during the FY 14 DDG combat system availability. This equipment did not require procurement funding in FY12; however, still required Design Services Allocation (DSA) and installation funding in FY 12-14. Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 7 / DM004 - AWS UPGRADE
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	203.127	69.911	66.186	51.440	-	51.440	112.127	107.400	122.487	144.715	1,492.450	2,369.843
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	203.127	69.911	66.186	51.440	-	51.440	112.127	107.400	122.487	144.715	1,492.450	2,369.843
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	203.127	69.911	66.186	51.440	-	51.440	112.127	107.400	122.487	144.715	1,492.450	2,369.843
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures equipment for the Aegis Weapon System (AWS) Upgrades that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 7 / DM004 - AWS UPGRADE			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: DM004 - AWS UPGRADE</i>													
B Kits													
Recurring													
1.1.1) AWS EQUIPMENT - NonOrganic ⁽⁹⁾	6 / 128.231	1 / 23.159	2 / 37.432	1 / 20.560	- / -	1 / 20.560	3 / 62.792	3 / 63.922	2 / 43.382	3 / 66.244	14 / 330.469	35 / 776.191	
<i>Subtotal: Recurring</i>	- / 128.231	- / 23.159	- / 37.432	- / 20.560	- / -	- / 20.560	- / 62.792	- / 63.922	- / 43.382	- / 66.244	- / 330.469	- / 776.191	
<i>Subtotal: DM004 - AWS UPGRADE</i>	6 / 128.231	1 / 23.159	2 / 37.432	1 / 20.560	- / -	1 / 20.560	3 / 62.792	3 / 63.922	2 / 43.382	3 / 66.244	14 / 330.469	35 / 776.191	
<i>Subtotal: Procurement, All Modification Items</i>	- / 128.231	- / 23.159	- / 37.432	- / 20.560	- / -	- / 20.560	- / 62.792	- / 63.922	- / 43.382	- / 66.244	- / 330.469	- / 776.191	
Support (All Modification Items)													
2.1) ENGINEERING SERVICES	- / 9.299	- / 3.065	- / 3.050	- / 3.284	- / -	- / 3.284	- / 4.272	- / 4.702	- / 5.704	- / 5.794	- / 33.043	- / 72.213	
<i>Subtotal: Support</i>	- / 9.299	- / 3.065	- / 3.050	- / 3.284	- / -	- / 3.284	- / 4.272	- / 4.702	- / 5.704	- / 5.794	- / 33.043	- / 72.213	
Installation													
<i>Modification Item 1 of 1: DM004 - AWS UPGRADE</i>	- / 65.597	- / 43.687	- / 25.704	- / 27.596	- / -	- / 27.596	- / 45.063	- / 38.776	- / 73.401	- / 72.677	- / 1,128.938	- / 1,521.439	
<i>Subtotal: Installation</i>	- / 65.597	- / 43.687	- / 25.704	- / 27.596	- / -	- / 27.596	- / 45.063	- / 38.776	- / 73.401	- / 72.677	- / 1,128.938	- / 1,521.439	
Total													
Total Cost (Procurement + Support + Installation)	203.127	69.911	66.186	51.440	-	51.440	112.127	107.400	122.487	144.715	1,492.450	2,369.843	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 7 / DM004 - AWS UPGRADE

Modification Item 1 of 1: DM004 - AWS UPGRADE

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN ⁽¹⁰⁾	Manufacturer Location: MOORESTOWN, NJ
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 20

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jul 2015	Apr 2016	Apr 2017	Mar 2018	May 2019	Jan 2020	May 2021
Delivery Dates	Mar 2016	Dec 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: AWS EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	3 / 65.597	2 / 42.574	1 / 18.309	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 126.480
FY 2015	- / -	- / 1.113	- / 5.431	1 / 16.063	- / -	1 / 16.063	- / -	- / -	- / -	- / -	- / -	1 / 22.607
FY 2016	- / -	- / -	- / 1.964	- / 10.365	- / -	- / 10.365	2 / 36.106	- / -	- / -	- / -	- / -	2 / 48.435
FY 2017	- / -	- / -	- / -	- / 1.168	- / -	- / 1.168	- / 5.819	1 / 19.836	- / -	- / -	- / -	1 / 26.823
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.138	- / 15.632	3 / 54.396	- / -	- / -	3 / 73.166
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.308	- / 16.470	3 / 56.743	- / -	3 / 76.521
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.535	- / 12.626	2 / 42.438	2 / 57.599
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.308	3 / 73.250	3 / 76.558
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 1,013.250	14 / 1,013.250
Total	3 / 65.597	2 / 43.687	1 / 25.704	1 / 27.596	- / -	1 / 27.596	2 / 45.063	1 / 38.776	3 / 73.401	3 / 72.677	19 / 1,128.938	35 / 1,521.439

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	3	-	-	1	1	-	-	-	1	-	-	1	-	-	2	-	-	-	1	-	-	1	1	-	1	-	2	-	1	19	35
Out	2	1	-	-	-	-	-	-	2	-	-	-	1	-	-	-	1	-	2	-	-	-	-	2	-	-	1	-	-	23	35

Footnotes:

⁽⁹⁾ Installation/DSA decreases due to correction of manday rate in Navy Data Environment (NDE). Interchangeable Cruiser/Destroyer combat system equipment has been installed during the FY 14 DDG combat system availability. This equipment did not require procurement funding in FY12; however, still required Design Services Allocation (DSA) and installation funding in FY 12-14. Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Unit cost decrease in FY 16 and follow due to updated unit cost information. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 7 / DM004 - AWS UPGRADE

⁽¹⁰⁾ \$2.962M reduced from AWS Equipment cost due to Congressional mark (AWS upgrade prior year contract savings). FY 17 and out will not be reduced as the AWS contract is negotiated yearly and largely depends on units procured for both DDG's and CG's. In FY 15 the contract was negotiated based on procuring 4 CG units and 1 DDG unit for a total of 5 units. In FY 16 and out we do not expect to have the same economies of scale savings as we will be procuring less units.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 8 / DM005 - MULTI-MISSION SIGPRO
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	127.440	23.936	38.224	23.048	-	23.048	58.795	58.790	48.092	65.916	456.883	901.124
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	127.440	23.936	38.224	23.048	-	23.048	58.795	58.790	48.092	65.916	456.883	901.124
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	127.440	23.936	38.224	23.048	-	23.048	58.795	58.790	48.092	65.916	456.883	901.124

(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:

Procures Multi-Mission SIGPRO combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 8 / DM005 - MULTI-MISSION SIGPRO			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: DM005 - MULTI-MISSION SIGPRO</i>													
B Kits													
Recurring													
1.1.1) MULTI-MISSION SIGPRO EQUIPMENT - NonOrganic ⁽¹¹⁾	7 / 106.834	1 / 15.487	2 / 31.531	1 / 16.049	- / -	1 / 16.049	3 / 49.014	3 / 49.896	2 / 33.863	3 / 51.709	14 / 257.959	36 / 612.342	
<i>Subtotal: Recurring</i>	- / 106.834	- / 15.487	- / 31.531	- / 16.049	- / -	- / 16.049	- / 49.014	- / 49.896	- / 33.863	- / 51.709	- / 257.959	- / 612.342	
<i>Subtotal: DM005 - MULTI-MISSION SIGPRO</i>	7 / 106.834	1 / 15.487	2 / 31.531	1 / 16.049	- / -	1 / 16.049	3 / 49.014	3 / 49.896	2 / 33.863	3 / 51.709	14 / 257.959	36 / 612.342	
<i>Subtotal: Procurement, All Modification Items</i>	- / 106.834	- / 15.487	- / 31.531	- / 16.049	- / -	- / 16.049	- / 49.014	- / 49.896	- / 33.863	- / 51.709	- / 257.959	- / 612.342	
Support (All Modification Items)													
2.1) ENGINEERING SERVICES	- / 9.011	- / 2.708	- / 2.744	- / 2.793	- / -	- / 2.793	- / 2.865	- / 2.919	- / 2.984	- / 3.038	- / 25.860	- / 54.922	
<i>Subtotal: Support</i>	- / 9.011	- / 2.708	- / 2.744	- / 2.793	- / -	- / 2.793	- / 2.865	- / 2.919	- / 2.984	- / 3.038	- / 25.860	- / 54.922	
Installation													
<i>Modification Item 1 of 1: DM005 - MULTI-MISSION SIGPRO</i>	- / 11.595	- / 5.741	- / 3.949	- / 4.206	- / -	- / 4.206	- / 6.916	- / 5.975	- / 11.245	- / 11.169	- / 173.064	- / 233.860	
<i>Subtotal: Installation</i>	- / 11.595	- / 5.741	- / 3.949	- / 4.206	- / -	- / 4.206	- / 6.916	- / 5.975	- / 11.245	- / 11.169	- / 173.064	- / 233.860	
Total													
Total Cost (Procurement + Support + Installation)	127.440	23.936	38.224	23.048	-	23.048	58.795	58.790	48.092	65.916	456.883	901.124	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 8 / DM005 - MULTI-MISSION SIGPRO

Modification Item 1 of 1: DM005 - MULTI-MISSION SIGPRO

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: MOORESTOWN, NJ
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Sep 2015	Jun 2016	Jun 2017	May 2018	Jul 2019	Mar 2020	Jul 2021
Delivery Dates	Mar 2016	Dec 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: MULTI-MISSION SIGPRO EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	4 / 11.595	2 / 5.589	1 / 2.802	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	7 / 19.986
FY 2015	- / -	- / 0.152	- / 0.830	1 / 2.433	- / -	1 / 2.433	- / -	- / -	- / -	- / -	- / -	1 / 3.415
FY 2016	- / -	- / -	- / 0.317	- / 1.584	- / -	- / 1.584	2 / 5.520	- / -	- / -	- / -	- / -	2 / 7.421
FY 2017	- / -	- / -	- / -	- / 0.189	- / -	- / 0.189	- / 0.889	1 / 3.053	- / -	- / -	- / -	1 / 4.131
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.507	- / 2.389	3 / 8.319	- / -	- / -	3 / 11.215
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.533	- / 2.517	3 / 8.706	- / -	3 / 11.756
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.409	- / 1.929	2 / 6.561	2 / 8.899
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.534	3 / 11.229	3 / 11.763
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 155.274	14 / 155.274
Total	4 / 11.595	2 / 5.741	1 / 3.949	1 / 4.206	- / -	1 / 4.206	2 / 6.916	1 / 5.975	3 / 11.245	3 / 11.169	19 / 173.064	36 / 233.860

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	4	-	-	1	1	-	-	-	1	-	-	-	1	-	-	2	-	-	-	1	-	-	1	1	-	1	-	2	-	1	19	36
Out	3	1	-	-	-	-	-	-	2	-	-	-	1	-	-	-	1	-	2	-	-	-	-	2	-	-	1	-	-	23	36	

Footnotes:

(11) Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod			Modification Number / Title: 9 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES					

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	6.761	1.011	2.058	1.048	-	1.048	3.199	3.257	2.210	3.375	16.837	39.756
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	6.761	1.011	2.058	1.048	-	1.048	3.199	3.257	2.210	3.375	16.837	39.756
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	6.761	1.011	2.058	1.048	-	1.048	3.199	3.257	2.210	3.375	16.837	39.756
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures Multi-Mission Solid State Amplifier (SSA)/Continuous Wave Illumination (CWI) Microwave Tubes upgrades for DDG Modernization Program that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 9 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES</i>													
B Kits													
Recurring													
1.1.1) MULTI-MISSION SSA/CWI MICROWAVE TUBES EQUIPMENT - Organic ⁽¹²⁾	7 / 6.761	1 / 1.011	2 / 2.058	1 / 1.048	- / -	1 / 1.048	3 / 3.199	3 / 3.257	2 / 2.210	3 / 3.375	14 / 16.837	36 / 39.756	
<i>Subtotal: Recurring</i>	- / 6.761	- / 1.011	- / 2.058	- / 1.048	- / -	- / 1.048	- / 3.199	- / 3.257	- / 2.210	- / 3.375	- / 16.837	- / 39.756	
<i>Subtotal: DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES</i>	7 / 6.761	1 / 1.011	2 / 2.058	1 / 1.048	- / -	1 / 1.048	3 / 3.199	3 / 3.257	2 / 2.210	3 / 3.375	14 / 16.837	36 / 39.756	
<i>Subtotal: Procurement, All Modification Items</i>	- / 6.761	- / 1.011	- / 2.058	- / 1.048	- / -	- / 1.048	- / 3.199	- / 3.257	- / 2.210	- / 3.375	- / 16.837	- / 39.756	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Total													
Total Cost (Procurement + Support + Installation)	6.761	1.011	2.058	1.048	-	1.048	3.199	3.257	2.210	3.375	16.837	39.756	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 9 / DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES

Modification Item 1 of 1: DM006 - MULTI-MISSION SSA/CWI MICROWAVE TUBES

Manufacturer Information

Manufacturer Name: VARIOUS				Manufacturer Location: VARIOUS			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 18			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Sep 2015	Jun 2016	Jun 2017	May 2018	Jul 2019	Mar 2020	Jul 2021
Delivery Dates	Mar 2016	Dec 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation (Organic): MULTI-MISSION SSA/CWI MICROWAVE TUBES EQUIPMENT - Not Installed	Installation Quantity: 36
--	----------------------------------

Footnotes:
⁽¹²⁾ Installation costs for this equipment are captured in P40A/DM6IN-Installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod				Modification Number / Title: 10 / DM007 - SPY-1D TRANSMITTER UPGRADES				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	31.647	5.382	10.148	5.523	-	5.523	10.740	16.030	6.232	6.226	0.240	92.168
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	31.647	5.382	10.148	5.523	-	5.523	10.740	16.030	6.232	6.226	0.240	92.168
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	31.647	5.382	10.148	5.523	-	5.523	10.740	16.030	6.232	6.226	0.240	92.168
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures SPY-1D Transmitter Upgrades combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 10 / DM007 - SPY-1D TRANSMITTER UPGRADES			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1:</i> DM007 - SPY-1D TRANSMITTER UPGRADES													
B Kits													
Recurring													
1.1.1) SPY-1D TRANSMITTER UPGRADES EQUIPMENT - Organic ⁽¹³⁾	7 / 30.100	1 / 4.639	2 / 9.446	1 / 4.808	- / -	1 / 4.808	2 / 9.789	3 / 14.948	1 / 5.072	1 / 5.163	- / -	18 / 83.965	
<i>Subtotal: Recurring</i>	- / 30.100	- / 4.639	- / 9.446	- / 4.808	- / -	- / 4.808	- / 9.789	- / 14.948	- / 5.072	- / 5.163	- / -	- / 83.965	
<i>Subtotal: DM007 - SPY-1D TRANSMITTER UPGRADES</i>	7 / 30.100	1 / 4.639	2 / 9.446	1 / 4.808	- / -	1 / 4.808	2 / 9.789	3 / 14.948	1 / 5.072	1 / 5.163	- / -	18 / 83.965	
<i>Subtotal: Procurement, All Modification Items</i>	- / 30.100	- / 4.639	- / 9.446	- / 4.808	- / -	- / 4.808	- / 9.789	- / 14.948	- / 5.072	- / 5.163	- / -	- / 83.965	
Support (All Modification Items)													
2.1) ENGINEERING SERVICES	- / 1.547	- / 0.743	- / 0.702	- / 0.715	- / -	- / 0.715	- / 0.951	- / 1.082	- / 1.160	- / 1.063	- / 0.240	- / 8.203	
<i>Subtotal: Support</i>	- / 1.547	- / 0.743	- / 0.702	- / 0.715	- / -	- / 0.715	- / 0.951	- / 1.082	- / 1.160	- / 1.063	- / 0.240	- / 8.203	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Total													
Total Cost (Procurement + Support + Installation)	31.647	5.382	10.148	5.523	-	5.523	10.740	16.030	6.232	6.226	0.240	92.168	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 10 / DM007 - SPY-1D TRANSMITTER UPGRADES

Modification Item 1 of 1: DM007 - SPY-1D TRANSMITTER UPGRADES

Manufacturer Information

Manufacturer Name: Raytheon				Manufacturer Location: Marlborough, MA			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 18			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Sep 2015	Jun 2016	Jun 2017	May 2018	Jul 2019	Mar 2020	Jul 2021
Delivery Dates	Mar 2016	Dec 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation (Organic): SPY-1D TRANSMITTER UPGRADES EQUIPMENT - Not Installed	Installation Quantity: 18
--	----------------------------------

Footnotes:

⁽¹³⁾ SPY-1D Transmitter Upgrades aren't required for DDG 91 and follow. Installation costs for this equipment are captured in P40A/DM6IN-Installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod				Modification Number / Title: 11 / DM008 - MULTI-MISSION BMD CAPABILITY				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	11.840	1.680	3.420	1.741	-	1.741	5.317	5.412	3.673	5.609	27.981	66.673
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	11.840	1.680	3.420	1.741	-	1.741	5.317	5.412	3.673	5.609	27.981	66.673
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	11.840	1.680	3.420	1.741	-	1.741	5.317	5.412	3.673	5.609	27.981	66.673
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures Multi-Mission Ballistic Missile Defense (BMD) Capability combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 11 / DM008 - MULTI-MISSION BMD CAPABILITY

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> DM008 - MULTI-MISSION BMD CAPABILITY												
B Kits												
Recurring												
1.1.1) MULTI-MISSION BMD EQUIPMENT - Organic (14)	7 / 11.840	1 / 1.680	2 / 3.420	1 / 1.741	- / -	1 / 1.741	3 / 5.317	3 / 5.412	2 / 3.673	3 / 5.609	14 / 27.981	36 / 66.673
<i>Subtotal: Recurring</i>	- / 11.840	- / 1.680	- / 3.420	- / 1.741	- / -	- / 1.741	- / 5.317	- / 5.412	- / 3.673	- / 5.609	- / 27.981	- / 66.673
<i>Subtotal: DM008 - MULTI-MISSION BMD CAPABILITY</i>	7 / 11.840	1 / 1.680	2 / 3.420	1 / 1.741	- / -	1 / 1.741	3 / 5.317	3 / 5.412	2 / 3.673	3 / 5.609	14 / 27.981	36 / 66.673
<i>Subtotal: Procurement, All Modification Items</i>	- / 11.840	- / 1.680	- / 3.420	- / 1.741	- / -	- / 1.741	- / 5.317	- / 5.412	- / 3.673	- / 5.609	- / 27.981	- / 66.673

Installation												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Total												
Total Cost (Procurement + Support + Installation)	11.840	1.680	3.420	1.741	-	1.741	5.317	5.412	3.673	5.609	27.981	66.673

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 11 / DM008 - MULTI-MISSION BMD CAPABILITY

Modification Item 1 of 1: DM008 - MULTI-MISSION BMD CAPABILITY

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: MOORESTOWN, NJ
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Sep 2015	Jun 2016	Jun 2017	May 2018	Jul 2019	Mar 2020	Jul 2021
Delivery Dates	Mar 2016	Dec 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation (Organic): MULTI-MISSION BMD EQUIPMENT - Not Installed	Installation Quantity: 36
--	----------------------------------

Footnotes:
⁽¹⁴⁾ Installation costs for this equipment are captured in P40A/DM6IN-Installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy								Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod				Modification Number / Title: 12 / DM009 - VLS UPGRADES			

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	56.126	12.019	17.061	13.013	-	13.013	25.573	25.600	23.037	28.924	219.207	420.560
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	56.126	12.019	17.061	13.013	-	13.013	25.573	25.600	23.037	28.924	219.207	420.560
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	56.126	12.019	17.061	13.013	-	13.013	25.573	25.600	23.037	28.924	219.207	420.560

(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:

Procures Vertical Launch System (VLS) Modifications, Evolved Sea Sparrow Missile VLS Modifications, SM3 Operability Heating Ventilation Air Conditioning (HVAC) and VLS MODS for SM3 Block 3 combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

[VLS EQUIPMENT] Engineering services increase in FY 18 due to increased number of Combat System availabilities in FY 20.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 12 / DM009 - VLS UPGRADES			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: DM009 - VLS UPGRADES</i>													
B Kits													
Recurring													
1.1.1) VLS EQUIPMENT - NonOrganic ⁽¹⁵⁾	6 / 38.389	1 / 5.052	2 / 10.286	1 / 5.235	- / -	1 / 5.235	3 / 15.989	3 / 16.277	2 / 11.047	3 / 16.868	14 / 84.150	35 / 203.293	
<i>Subtotal: Recurring</i>	- / 38.389	- / 5.052	- / 10.286	- / 5.235	- / -	- / 5.235	- / 15.989	- / 16.277	- / 11.047	- / 16.868	- / 84.150	- / 203.293	
<i>Subtotal: DM009 - VLS UPGRADES</i>	6 / 38.389	1 / 5.052	2 / 10.286	1 / 5.235	- / -	1 / 5.235	3 / 15.989	3 / 16.277	2 / 11.047	3 / 16.868	14 / 84.150	35 / 203.293	
<i>Subtotal: Procurement, All Modification Items</i>	- / 38.389	- / 5.052	- / 10.286	- / 5.235	- / -	- / 5.235	- / 15.989	- / 16.277	- / 11.047	- / 16.868	- / 84.150	- / 203.293	
Support (All Modification Items)													
2.1) ENGINEERING SERVICES	- / 11.736	- / 4.153	- / 4.800	- / 5.656	- / -	- / 5.656	- / 6.158	- / 6.269	- / 6.381	- / 6.496	- / 48.869	- / 100.518	
<i>Subtotal: Support</i>	- / 11.736	- / 4.153	- / 4.800	- / 5.656	- / -	- / 5.656	- / 6.158	- / 6.269	- / 6.381	- / 6.496	- / 48.869	- / 100.518	
Installation													
<i>Modification Item 1 of 1: DM009 - VLS UPGRADES</i>	- / 6.001	- / 2.814	- / 1.975	- / 2.122	- / -	- / 2.122	- / 3.426	- / 3.054	- / 5.609	- / 5.560	- / 86.188	- / 116.749	
<i>Subtotal: Installation</i>	- / 6.001	- / 2.814	- / 1.975	- / 2.122	- / -	- / 2.122	- / 3.426	- / 3.054	- / 5.609	- / 5.560	- / 86.188	- / 116.749	
Total													
Total Cost (Procurement + Support + Installation)	56.126	12.019	17.061	13.013	-	13.013	25.573	25.600	23.037	28.924	219.207	420.560	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 12 / DM009 - VLS UPGRADES

Modification Item 1 of 1: DM009 - VLS UPGRADES

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: MOORESTOWN, NJ
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Sep 2015	Jun 2016	Jun 2017	May 2018	Jul 2019	Mar 2020	Jul 2021
Delivery Dates	Mar 2016	Dec 2017	Dec 2018	Nov 2019	Jan 2021	Sep 2021	Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: VLS EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	3 / 6.001	2 / 2.734	1 / 1.364	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 10.099
FY 2015	- / -	- / 0.080	- / 0.445	1 / 1.173	- / -	1 / 1.173	- / -	- / -	- / -	- / -	- / -	1 / 1.698
FY 2016	- / -	- / -	- / 0.166	- / 0.850	- / -	- / 0.850	2 / 2.684	- / -	- / -	- / -	- / -	2 / 3.700
FY 2017	- / -	- / -	- / -	- / 0.099	- / -	- / 0.099	- / 0.477	1 / 1.494	- / -	- / -	- / -	1 / 2.070
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.265	- / 1.280	3 / 4.046	- / -	- / -	3 / 5.591
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.280	- / 1.349	3 / 4.246	- / -	3 / 5.875
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.214	- / 1.035	2 / 3.224	2 / 4.473
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.279	3 / 5.600	3 / 5.879
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 77.364	14 / 77.364
Total	3 / 6.001	2 / 2.814	1 / 1.975	1 / 2.122	- / -	1 / 2.122	2 / 3.426	1 / 3.054	3 / 5.609	3 / 5.560	19 / 86.188	35 / 116.749

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	3	-	-	1	1	-	-	-	1	-	-	-	1	-	-	2	-	-	-	1	-	-	1	1	-	1	-	2	-	1	19	35
Out	2	1	-	-	-	-	-	1	1	-	-	-	1	-	-	-	1	-	2	-	-	-	-	2	-	-	1	-	-	23	35	

Footnotes:

(15) Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod				Modification Number / Title: 13 / DM010 - FCS STAMO				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	13.943	0.500	0.400	-	-	-	-	-	-	-	-	14.843
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	13.943	0.500	0.400	-	-	-	-	-	-	-	-	14.843
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	13.943	0.500	0.400	-	-	-	-	-	-	-	-	14.843
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures Stabilized Master Oscillator (STAMO) combat systems that include equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 13 / DM010 - FCS STAMO			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> DM010 - FCS STAMO													
B Kits													
Recurring													
1.1.1) FCS STAMO EQUIPMENT - NonOrganic ⁽¹⁶⁾	6 / 12.743	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 12.743	
<i>Subtotal: Recurring</i>	- / 12.743	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.743	
<i>Subtotal: DM010 - FCS STAMO</i>	6 / 12.743	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 12.743	
<i>Subtotal: Procurement, All Modification Items</i>	- / 12.743	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.743	
Installation													
<i>Modification Item 1 of 1:</i> DM010 - FCS STAMO													
<i>Subtotal: Installation</i>	- / 1.200	- / 0.500	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.100	
Total													
Total Cost (Procurement + Support + Installation)	13.943	0.500	0.400	-	-	-	-	-	-	-	-	14.843	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 13 / DM010 - FCS STAMO

Modification Item 1 of 1: DM010 - FCS STAMO

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: Marlborough, MA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: FCS STAMO EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	3 / 1.200	2 / 0.500	1 / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 2.100
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	3 / 1.200	2 / 0.500	1 / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.100

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	3	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Out	2	1	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6

Footnotes:

⁽¹⁶⁾ STAMO has previously been installed on all DDG Flight IIA's, i.e. DDG 79 and follow previously received STAMO. Interchangeable Cruiser/Destroyer combat system equipment has been installed during the FY 14 DDG combat system availability. This equipment did not require procurement funding in FY12; however, still required Design Services Allocation (DSA) and installation funding in FY 12-14. Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 14 / DM011 - AN/SQQ-89 A(V15)
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	81.760	11.635	26.955	13.185	-	13.185	28.503	25.650	12.472	11.128	36.056	247.344
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	81.760	11.635	26.955	13.185	-	13.185	28.503	25.650	12.472	11.128	36.056	247.344
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	81.760	11.635	26.955	13.185	-	13.185	28.503	25.650	12.472	11.128	36.056	247.344

(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:

Procures improved AN/SQQ-89 A(V)15 with Multi-Functional Towed Array (MFTA) combat systems to replace the installed MIL-STD AN/SQQ-89(V) that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships. Flight IIA DDGs have previously received an SQQ-89(A)V15 installation.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 14 / DM011 - AN/SQQ-89 A(V15)			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> DM011 - AN/SQQ-89 A(V15)													
B Kits													
Recurring													
1.1.1) AN/SQQ-89 EQUIPMENT A(V15) - NonOrganic (17)	7 / 53.422	- / -	2 / 15.688	1 / 7.985	- / -	1 / 7.985	2 / 16.258	2 / 16.550	- / -	- / -	- / -	14 / 109.903	
<i>Subtotal: Recurring</i>	- / 53.422	- / -	- / 15.688	- / 7.985	- / -	- / 7.985	- / 16.258	- / 16.550	- / -	- / -	- / -	- / 109.903	
<i>Subtotal: DM011 - AN/SQQ-89 A(V15)</i>	7 / 53.422	- / -	2 / 15.688	1 / 7.985	- / -	1 / 7.985	2 / 16.258	2 / 16.550	- / -	- / -	- / -	14 / 109.903	
<i>Subtotal: Procurement, All Modification Items</i>	- / 53.422	- / -	- / 15.688	- / 7.985	- / -	- / 7.985	- / 16.258	- / 16.550	- / -	- / -	- / -	- / 109.903	
Support (All Modification Items)													
2.1) ENGINEERING SERVICES	- / 13.390	- / 2.746	- / 2.795	- / 2.845	- / -	- / 2.845	- / 2.896	- / 2.949	- / 3.002	- / 3.056	- / 36.056	- / 69.735	
<i>Subtotal: Support</i>	- / 13.390	- / 2.746	- / 2.795	- / 2.845	- / -	- / 2.845	- / 2.896	- / 2.949	- / 3.002	- / 3.056	- / 36.056	- / 69.735	
Installation													
<i>Modification Item 1 of 1:</i> DM011 - AN/SQQ-89 A(V15)	- / 14.948	- / 8.889	- / 8.472	- / 2.355	- / -	- / 2.355	- / 9.349	- / 6.151	- / 9.470	- / 8.072	- / -	- / 67.706	
<i>Subtotal: Installation</i>	- / 14.948	- / 8.889	- / 8.472	- / 2.355	- / -	- / 2.355	- / 9.349	- / 6.151	- / 9.470	- / 8.072	- / -	- / 67.706	
Total													
Total Cost (Procurement + Support + Installation)	81.760	11.635	26.955	13.185	-	13.185	28.503	25.650	12.472	11.128	36.056	247.344	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 14 / DM011 - AN/SQQ-89 A(V15)

Modification Item 1 of 1: DM011 - AN/SQQ-89 A(V15)

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Syracuse, NY
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Dec 2016	Feb 2018	Sep 2018	Jul 2019		
Delivery Dates		Jun 2018	Aug 2019	Mar 2020	Jan 2021		

Installation Information

Method of Implementation: [none specified]:: Installation Name: AN/SQQ-89 EQUIPMENT A(V15)

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	3 / 14.948	2 / 8.889	2 / 8.056	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	7 / 31.893
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / 0.416	- / 2.133	- / -	- / 2.133	2 / 7.932	- / -	- / -	- / -	- / -	2 / 10.481
FY 2017	- / -	- / -	- / -	- / 0.222	- / -	- / 0.222	- / 0.978	1 / 3.674	- / -	- / -	- / -	1 / 4.874
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.439	- / 1.979	2 / 7.226	- / -	- / -	2 / 9.644
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.498	- / 2.244	2 / 8.072	- / -	2 / 10.814
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	3 / 14.948	2 / 8.889	2 / 8.472	- / 2.355	- / -	- / 2.355	2 / 9.349	1 / 6.151	2 / 9.470	2 / 8.072	- / -	14 / 67.706

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	3	-	-	1	1	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	1	1	-	1	-	1	-	-
Out	2	1	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	2	1	-	1	1	-

Footnotes:

(17) Interchangeable Cruiser/Destroyer combat system equipment has been installed during the FY 14 DDG combat system availability. This equipment did not require procurement funding in FY12; however, still required Design Services Allocation (DSA) and installation funding in FY 12-14. Flight IIA DDGs have previously received an SQQ-89(A)V15 installation. Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0900 / DDG Mod				Modification Number / Title: 15 / DM012 - CEC				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	34.709	5.001	2.433	-	-	-	-	-	-	-	-	42.143
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	34.709	5.001	2.433	-	-	-	-	-	-	-	-	42.143
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	34.709	5.001	2.433	-	-	-	-	-	-	-	-	42.143

(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:

Procures Cooperative Engagement Capability (CEC) combat systems that includes equipment procurement, recurring engineering, equipment integration and Integrated Logistics Support (ILS) products for DDG 51 Class ships. Flight IIA DDGs have previously received CEC installation.

Engineering Services:

Production Support Services are phased over a three (3) year span starting two (2) years prior to installation on a per hull basis. It includes five (5) elements that are related to the production and delivery of a usable end-item: Production Engineering, Quality Assurance, Product Improvement, Acceptance Test and Evaluation, and Contractor Engineering and Technical Services (CETS). Due to the phasing of the requirement over a three year period, engineering services will fluctuate depending on the number of ships in each year.

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

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

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

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

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

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0900 / DDG Mod					Modification Number / Title: 15 / DM012 - CEC			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> DM012 - CEC													
B Kits													
Recurring													
1.1.1) CEC EQUIPMENT - NonOrganic ⁽¹⁸⁾	6 / 26.790	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 26.790	
<i>Subtotal: Recurring</i>	- / 26.790	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 26.790	
<i>Subtotal: DM012 - CEC</i>	6 / 26.790	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 26.790	
<i>Subtotal: Procurement, All Modification Items</i>	- / 26.790	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 26.790	
Support (All Modification Items)													
2.1) ENGINEERING SERVICES	- / 1.285	- / 0.033	- / 0.044	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.362	
<i>Subtotal: Support</i>	- / 1.285	- / 0.033	- / 0.044	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.362	
Installation													
<i>Modification Item 1 of 1:</i> DM012 - CEC	- / 6.634	- / 4.968	- / 2.389	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.991	
<i>Subtotal: Installation</i>	- / 6.634	- / 4.968	- / 2.389	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.991	
Total													
Total Cost (Procurement + Support + Installation)	34.709	5.001	2.433	-	-	-	-	-	-	-	-	42.143	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0900 / DDG Mod	Modification Number / Title: 15 / DM012 - CEC

Modification Item 1 of 1: DM012 - CEC

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: St. Petersburg, FL
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: CEC EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	3 / 6.634	2 / 4.968	1 / 2.389	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 13.991
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	3 / 6.634	2 / 4.968	1 / 2.389	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 13.991

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	3	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Out	2	1	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6

Footnotes:

(18) Interchangeable Cruiser/Destroyer combat system equipment has been installed during the FY 14 DDG combat system availability. This equipment did not require procurement funding in FY12; however, still required Design Services Allocation (DSA) and installation funding in FY 12-14. Flight IIA DDGs have already received CEC. Installation costs across the FYDP may vary depending on current port rates. Port rates are updated every year by a CNRMC letter based on the forecasted port loading model. Port loading rate forecasts are the rates recommended for all budgeted maintenance and organic modernization within a specific port. Individual ship's availability durations vary dependent upon the integration of ship's maintenance and modernization work packages.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	P-1 Line Item Number / Title: 0910 / Firefighting Equipment
---	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	59.682	15.134	13.983	14.743	-	14.743	15.865	19.379	17.764	18.117	266.900	441.567
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	59.682	15.134	13.983	14.743	-	14.743	15.865	19.379	17.764	18.117	266.900	441.567
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	59.682	15.134	13.983	14.743	-	14.743	15.865	19.379	17.764	18.117	266.900	441.567

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2016 funding request reflects a congressional reduction of \$2.106 million for SCBA Cost Growth.

FY 2017 funding request reflects a reduction of \$1.502 million to account for the availability prior year available balances.

The growth between FY2016 and FY2017 is attributable to SOPV Replacement (6 units required in FY2017) and Firefighter Access (2 units required in FY2017)

The Department decided that a number of survivability improvements needed to be incorporated into mission-essential ship and combat systems during their acquisition and modernization. Shipboard fires have emphasized the urgent need to upgrade features and design standards that contribute to survivability.

[P40A / HB003 - BREATHING APPARATUS REPLACEMENT]: Breathing apparatus are reaching service life of 15 years and must be replaced. EEBD and SCBA funding includes shipping, distribution to and secure stowage on ships. There are 2 types of apparatus which require replacement: (1) Emergency Escape Breathing Devices (EEBD), and (2) Self-Contained Breathing Apparatus (SCBA) for firefighters. The EEBD and SCBA quantity and cost varies based on ship class and location.

[P40A / HB830 PRODUCTION ENGINEERING]: Development of technical manuals, Planned Maintenance System (PMS), Provisioning Technical Documentation (PTD), Program Support Data (PSD) and Allowance Parts List (APLs); engineering to manage procurement and material, and in support of design reviews.

[P3A / HB002 - MAGAZINE SPRINKLING IMPROVEMENT]: HB002 - MAGAZINE SPRINKLING IMPROVEMENT
Replaces the detection system designed in the 1960s, which performs poorly and is difficult to support and maintain.

[P3A / MAGAZINE SPRINKLING IMPROVEMENT]: HBINS (HB5IN/HB6IN) - INSTALLATION OF EQUIPMENT
Funding is for installation of equipment for the Fleet Modernization Program installations.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0910 / Firefighting Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P3A - 2 / HB007 SOPV REPLACEMENT]: HB007 - REPLACE SOLENOID-OPERATED PILOT VALVE (SOPV)The SOPV is a high-maintenance item. The SOPV provides a way for remote control of the Aqueous Film Forming Foam (AFFF) and countermeasure wash down (CMWD) systems. Replacement is required to ensure these systems are operational for emergencies. Top Management Attention/Top Management Initiative (TMA/TMI) and INSURV interest due to impact of this item on AFFF system operation. The requirement is for all surface ships.</p> <p>[P3A - 2 / HB007 SOPV REPLACEMENT FIRST ARTICLES]: HBINS (HB6IN) - INSTALLATION OF EQUIPMENT Funding is for installation of equipment for the Fleet Modernization Program installations.</p> <p>[P3A - 3 / HB009 FIREFIGHTER ACCESS]: HB5IN - INSTALLATION OF EQUIPMENT Funds the Firefighter Extraction System (FES) and Ladder Safety System (LSS) installation in the Main Machinery Room (MMR) and Auxiliary Machinery Room (AMR) escape trunks on LSD-41, LSD-49 and LPD-17 class hulls. The alterations consist of the installation of escape trunk ladder safety rails used in conjunction with safety belts and lifting pad-eyes installed at the top of the escape trunks. The LSD41/49 classes have four escape trunks to be modified. The LPD-17 class have five trunks to be modified. The FES and LSS will be installed and weight tested via a coordinated effort between the Alteration Installation Team (AIT), NSWC Panama City, and NSWCCD Code 668. Ship's force training will be provided by representatives from NSWC Panama City, FL. Government Furnished Material will also be provided to the AIT by NSWC Panama City, FL.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0910 / Firefighting Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Firefighting Equipment	P-5a, P-21		- / 48.115	- / 14.280	- / 13.983	- / 12.485	- / -	- / 12.485
P-3a	1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT (TBD)			- / 1.398	- / 0.394	- / -	- / -	- / -	- / -
P-3a	2 / HB007 - SOPV REPLACEMENT (TBD)			- / 2.611	- / 0.336	- / -	- / 1.784	- / -	- / 1.784
P-3a	3 / HB009 - FIREFIGHTER ACCESS (TBD)			- / 7.558	- / 0.124	- / -	- / 0.474	- / -	- / 0.474
P-40	Total Gross/Weapon System Cost			- / 59.682	- / 15.134	- / 13.983	- / 14.743	- / -	- / 14.743

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Firefighting Equipment	P-5a, P-21		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT (TBD)			- / 1.687	- / 5.062	- / 4.976	- / 6.260	- / 187.364	- / 207.141
P-3a	2 / HB007 - SOPV REPLACEMENT (TBD)			- / 0.944	- / 3.543	- / 3.133	- / 3.573	- / 57.957	- / 73.881
P-3a	3 / HB009 - FIREFIGHTER ACCESS (TBD)			- / -	- / -	- / -	- / -	- / -	- / 8.156
P-40	Total Gross/Weapon System Cost			- / 15.865	- / 19.379	- / 17.764	- / 18.117	- / 266.900	- / 441.567

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0910 / Firefighting Equipment **Aggregated Items Title:** Firefighting Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) HB003 - BREATHING APPARATUS REPLACEMENT ⁽¹⁾																				
1.1) EMERGENCY ESCAPE BREATHING DEVICES (EEBD) ^(†)	A		288,697.67	43	12.414	341,047.62	21	7.162	314,913.04	23	7.243	267,933.33	15	4.019	-	-	-	267,933.33	15	4.019
1.2) SELF-CONTAINED BREATHING APPARATUS (SCBA) ^(†)	A		595,676.47	34	20.253	575,700.00	10	5.757	528,600.00	10	5.286	358,100.00	20	7.162	-	-	-	358,100.00	20	7.162
Subtotal: 1) HB003 - BREATHING APPARATUS REPLACEMENT			-	-	32.667	-	-	12.919	-	-	12.529	-	-	11.181	-	-	-	-	-	11.181
2) HB830 PRODUCTION ENGINEERING																				
2.1) HB830 - PRODUCTION ENGINEERING	A		-	-	15.448	-	-	1.361	-	-	1.454	-	-	1.304	-	-	-	-	-	1.304
Subtotal: 2) HB830 PRODUCTION ENGINEERING			-	-	15.448	-	-	1.361	-	-	1.454	-	-	1.304	-	-	-	-	-	1.304
Total			-	-	48.115	-	-	14.280	-	-	13.983	-	-	12.485	-	-	-	-	-	12.485

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 units on the P40 are ships not unit costs for EEEDs and SCBAs, therefore unit cost is dependent on the distribution of ship classes planned during each FY. As large deck amphibs have four to five times the equipment requirement as a DDG 51 or CG 47, the net unit cost will be much higher in years where multiple large deck amphibs are planned. HB003 - SCBA replacement includes the apparatus, 45-minute air cylinders, and 30-minute air cylinders. FY16 procurement is for four CG-47 class ships (average \$447K), five DDG-51 FLT I/II class ships (average \$541K) and one LSD-41 class ship (\$793K) with a program total of \$5.286M. FY17 procurement is for two CG-47 class ships (average \$442K), four DDG-51 FLT I/II class ships (average \$515K), one DDG-51 FLT IIA class ship (average \$547K), nine LCU class ships (average \$51K), two LHD-1 class ships (average 1,520K) and two PC class ships (average \$86K) for a program total of \$7.162M. EEED FY16 procurement is for four CG-47 class ships (average \$223K), fifteen DDG-51 class ships (average \$223K), two LHD-1 class ships (average \$1,150) and two LSD-41 class ships (average \$353K) with a program total of \$7.243M. FY17 procurement is for three CG-47 class ships (average \$210K), six DDG-51 class ships (average \$210K), one LHD-1 class ship (\$1,130K), one LPD-17 class ship (\$536K), three MCM-1 class ship (average \$39K), and one LSD-41 class ship (\$346K) for a program total of \$4.019M. Ship to ship costs can vary significantly depending on their port location.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Aggregated Items: Firefighting Equipment
---	---	--

Item Number / Title [DODIC]	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) HB003 - BREATHING APPARATUS REPLACEMENT												
1.1) EMERGENCY ESCAPE BREATHING DEVICES (EEBD) ^(†)		2015 ⁽²⁾	OCENCO ⁽³⁾ / PLEASANT PRAIRIE, WI	C / FP	NSWC, PCD	Jan 2015	Mar 2015	21	341,047.62	Y		
1.1) EMERGENCY ESCAPE BREATHING DEVICES (EEBD) ^(†)		2016 ⁽⁴⁾	OCENCO ⁽³⁾ / PLEASANT PRAIRIE, WI	C / FP	NSWC, PCD	Jan 2016	Apr 2016	23	314,913.04	Y		
1.1) EMERGENCY ESCAPE BREATHING DEVICES (EEBD) ^(†)		2017 ⁽⁵⁾	OCENCO ⁽³⁾ / PLEASANT PRAIRIE, WI	C / FP	NSWC, PCD	Jan 2017	Apr 2017	15	267,933.33	Y		
1.2) SELF-CONTAINED BREATHING APPARATUS (SCBA) ^(†)		2015	SCOTT HEALTH & SAFETY / MONROE, NC	C / FP	NSWC, PCD	Jan 2015	Apr 2015	10	575,700.00	Y		
1.2) SELF-CONTAINED BREATHING APPARATUS (SCBA) ^(†)		2016	SCOTT HEALTH & SAFETY / MONROE, NC	C / FP	NSWC, PCD	Jan 2016	Apr 2016	10	528,600.00	Y		
1.2) SELF-CONTAINED BREATHING APPARATUS (SCBA) ^(†)		2017	SCOTT HEALTH & SAFETY / MONROE, NC	C / FP	NSWC, PCD	Jan 2017	Apr 2017	20	358,100.00	Y		

^(†) indicates the presence of a P-21

Footnotes:

⁽²⁾ In FY15, EEBDs for 21 ships were/are being awarded through 3 methods associated with changes in National Institute for Occupational Safety and Health (NIOSH) requirements: three (3) ships were sole sourced in Jan 15, seven (7) ships were procured via MILSTRIP in Aug 15, and eleven ships (11) meeting new NIOSH requirements are being awarded in Nov 15.

⁽³⁾ Sole-source contract.

⁽⁴⁾ In FY16, EEBDs for 23 ships are being awarded through competitive contract.

⁽⁵⁾ In FY17, EEBDs for 15 ships will be awarded through competitive contract.

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0910 / Firefighting Equipment **Aggregated Items:** Firefighting Equipment

Items <i>(Units in Each)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE	
O C C #	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
1) HB003 - BREATHING APPARATUS REPLACEMENT																															
1.1) EMERGENCY ESCAPE BREATHING DEVICES (EEBD)																															
Prior Years Deliveries: 43																															
2		2015	NAVY	21	21	-																							-		
2		2016	NAVY	23	23	-																							-		
2		2017	NAVY	15	-	15																							-		
1.2) SELF-CONTAINED BREATHING APPARATUS (SCBA)																															
Prior Years Deliveries: 34																															
3		2015	NAVY	10	10	-																							-		
3		2016	NAVY	10	10	-																							-		
3		2017	NAVY	20	-	20																							-		
							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 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Aggregated Items: Firefighting Equipment
---	---	--

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	OCENCO ⁽³⁾ - PLEASANT PRAIRIE, WI	-	-	-	-	-	-	-	-	-	-	-	-
2	SCOTT HEALTH & SAFETY - MONROE, NC	-	-	-	-	-	-	-	-	-	-	-	-

"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).

Footnotes:

⁽³⁾ Sole-source contract.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0910 / Firefighting Equipment				Modification Number / Title: 1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1.398	0.394	-	-	-	-	1.687	5.062	4.976	6.260	187.364	207.141
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1.398	0.394	-	-	-	-	1.687	5.062	4.976	6.260	187.364	207.141
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1.398	0.394	-	-	-	-	1.687	5.062	4.976	6.260	187.364	207.141

(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:

[MAGAZINE SPRINKLING IMPROVEMENT] Magazine sprinkling improvement replaces the detection system designed in the 1960s, which performs poorly and is difficult to support and maintain. Magazine sprinkling improvements may require installation by shipyards and if so will be programmed for CNO availabilities. Delivery of each ship set is planned for several months in advance of availability start to reduce risk of ship availability changes.

Unit costs vary significantly by ship class due to the quantity and/or size of the magazines. Amphibious ships have larger magazines, requiring more fire detectors than DDG-51 Class ships, and DDG-51 Class ships already have smoke detectors. Equipment pricing is actual contact price plus administrative cost. There is no cost growth in equipment cost. Units are quantities of ships; equipment cost varies by ship.

Procurement is for Fire Detection and Actuation Systems (FDAS) and for motor-operated pilot valves (MOPV). The FDAS consists of heat detectors, smoke detectors for amphibious ships, and associated electronic controls. When the FDAS detects a fire, the MOPV opens to provide the sprinkling for the magazine. The MOPV is the same item procured to replace SOPVs under HB007, resulting in reduced unit costs in some years, and in reduced logistics costs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Modification Number / Title: 1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> HB002 - MAGAZINE SPRINKLING IMPROVEMENT												
B Kits												
Recurring												
1.1.1) MAGAZINE SPRINKLING IMPROVEMENT - NonOrganic ⁽⁶⁾	2 / 0.553	- / -	- / -	- / -	- / -	- / -	1 / 0.214	5 / 1.084	5 / 1.107	7 / 1.568	92 / 46.544	112 / 51.070
1.1.2) DSA COST - Organic	2 / 0.345	- / -	- / -	- / -	- / -	- / -	- / 0.994	- / 1.537	- / 1.377	- / 1.274	- / 37.229	2 / 42.756
<i>Subtotal: Recurring</i>	- / 0.898	- / -	- / -	- / -	- / -	- / -	- / 1.208	- / 2.621	- / 2.484	- / 2.842	- / 83.773	- / 93.826
<i>Subtotal: HB002 - MAGAZINE SPRINKLING IMPROVEMENT</i>	4 / 0.898	- / -	- / -	- / -	- / -	- / -	1 / 1.208	5 / 2.621	5 / 2.484	7 / 2.842	92 / 83.773	114 / 93.826
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.898	- / -	- / -	- / -	- / -	- / -	- / 1.208	- / 2.621	- / 2.484	- / 2.842	- / 83.773	- / 93.826

Installation												
<i>Modification Item 1 of 1:</i> HB002 - MAGAZINE SPRINKLING IMPROVEMENT												
<i>Subtotal: Installation</i>	- / 0.500	- / 0.394	- / -	- / -	- / -	- / -	- / 0.479	- / 2.441	- / 2.492	- / 3.418	- / 103.591	- / 113.315

Total												
Total Cost (Procurement + Support + Installation)	1.398	0.394	-	-	-	-	1.687	5.062	4.976	6.260	187.364	207.141

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Modification Number / Title: 1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT

Modification Item 1 of 1: HB002 - MAGAZINE SPRINKLING IMPROVEMENT

Manufacturer Information

Manufacturer Name: Marotta ⁽⁷⁾				Manufacturer Location: Montville, NJ			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 4			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jan 2015	Jan 2016	Jan 2017	Jan 2018	Jan 2019	Jan 2020	
Delivery Dates	May 2015	May 2016	May 2017	May 2018	May 2019	May 2020	

Manufacturer Name: Dynalec Corp. ⁽⁸⁾				Manufacturer Location: Sodus, N.Y.			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 6			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jan 2015	Jan 2016	Jan 2017	Jan 2018	Jan 2019	Jan 2020	
Delivery Dates	Jul 2015	Jul 2016	Jul 2017	Jul 2018	Jul 2019	Jul 2020	

Installation Information

Method of Implementation: SHIPALT:: Installation Name: MAGAZINE SPRINKLING IMPROVEMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.500	1 / 0.394	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / 0.894
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.479	- / -	- / -	- / -	- / -	1 / 0.479
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.441	- / -	- / -	- / -	5 / 2.441
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.492	- / -	- / -	5 / 2.492
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 3.418	- / -	7 / 3.418
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	92 / 103.591	92 / 103.591
Total	1 / 0.500	1 / 0.394	- / -	- / -	- / -	- / -	1 / 0.479	5 / 2.441	5 / 2.492	7 / 3.418	92 / 103.591	112 / 113.315

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Modification Number / Title: 1 / HB002 - MAGAZINE SPRINKLING IMPROVEMENT

Modification Item 1 of 1: HB002 - MAGAZINE SPRINKLING IMPROVEMENT

Installation Information

Method of Implementation: SHIPALT:: Installation Name: MAGAZINE SPRINKLING IMPROVEMENT

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	3	2	-	-	3	2	-	-	4	3	92	112
Out	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	3	2	-	-	3	2	-	-	99	112

Method of Implementation (Organic): DSA COST - Not Installed

Installation Quantity: 2

Footnotes:

- (6) FY15 install cost is for one DDG-51 Class ship (DDG-57).
- (7) Same contract for HB007 requirements
- (8) Award for first article testing 2012-05

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Modification Number / Title: 2 / HB007 - SOPV REPLACEMENT
---	---	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	2.611	0.336	-	1.784	-	1.784	0.944	3.543	3.133	3.573	57.957	73.881
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	2.611	0.336	-	1.784	-	1.784	0.944	3.543	3.133	3.573	57.957	73.881
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	2.611	0.336	-	1.784	-	1.784	0.944	3.543	3.133	3.573	57.957	73.881

(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:

[HB007 SOPV REPLACEMENT] The SOPV provides a way for remote control of AFFF and countermeasure wash down (CMWD) systems. Replacement is required to ensure these systems are operational for emergencies. Top Management Attention/Top Management Initiative (TMA/TMI) and INSURV interest due to impact of this item on AFFF system operation. The requirement is for all surface ships.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0910 / Firefighting Equipment					Modification Number / Title: 2 / HB007 - SOPV REPLACEMENT			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: HB007 - SOPV REPLACEMENT</i>													
B Kits													
Recurring													
1.1.1) HB007 SOPV REPLACEMENT - NonOrganic	7 / 0.599	1 / 0.086	- / -	6 / 0.600	- / -	6 / 0.600	3 / 0.309	14 / 0.986	12 / 0.845	14 / 1.016	71 / 25.054	128 / 29.495	
1.1.2) HB007 SOPV REPLACEMENT FIRST ARTICLES - Organic ⁽⁹⁾	2 / 0.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.240	
1.1.3) DSA COST - Organic	- / 0.537	- / 0.065	- / -	- / 0.159	- / -	- / 0.159	- / 0.080	- / 0.317	- / 0.368	- / 0.317	71 / 6.504	71 / 8.347	
<i>Subtotal: Recurring</i>	- / 1.376	- / 0.151	- / -	- / 0.759	- / -	- / 0.759	- / 0.389	- / 1.303	- / 1.213	- / 1.333	- / 31.558	- / 38.082	
<i>Subtotal: HB007 - SOPV REPLACEMENT</i>	9 / 1.376	1 / 0.151	- / -	6 / 0.759	- / -	6 / 0.759	3 / 0.389	14 / 1.303	12 / 1.213	14 / 1.333	142 / 31.558	201 / 38.082	
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.376	- / 0.151	- / -	- / 0.759	- / -	- / 0.759	- / 0.389	- / 1.303	- / 1.213	- / 1.333	- / 31.558	- / 38.082	
Installation													
<i>Modification Item 1 of 1: HB007 - SOPV REPLACEMENT</i>													
<i>Subtotal: Installation</i>	- / 1.235	- / 0.185	- / -	- / 1.025	- / -	- / 1.025	- / 0.555	- / 2.240	- / 1.920	- / 2.240	- / 26.399	- / 35.799	
Total													
Total Cost (Procurement + Support + Installation)	2.611	0.336	-	1.784	-	1.784	0.944	3.543	3.133	3.573	57.957	73.881	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Modification Number / Title: 2 / HB007 - SOPV REPLACEMENT

Modification Item 1 of 1: HB007 - SOPV REPLACEMENT

Manufacturer Information

Manufacturer Name: Marotta ⁽¹⁰⁾				Manufacturer Location: Montville, NJ			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 4			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jan 2015	Jan 2016	Jan 2017	Jan 2018	Jan 2019	Jan 2020	
Delivery Dates	May 2015	May 2016	May 2017	May 2018	May 2019	May 2020	

Installation Information

Method of Implementation: SHIPALT - AIT:: Installation Name: HB007 SOPV REPLACEMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	7 / 1.235	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	7 / 1.235
FY 2015	- / -	1 / 0.185	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.185
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	6 / 1.025	- / -	6 / 1.025	- / -	- / -	- / -	- / -	- / -	6 / 1.025
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.555	- / -	- / -	- / -	- / -	3 / 0.555
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 2.240	- / -	- / -	- / -	14 / 2.240
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.920	- / -	- / -	12 / 1.920
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 2.240	- / -	14 / 2.240
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 26.399	71 / 26.399
Total	7 / 1.235	1 / 0.185	- / -	6 / 1.025	- / -	6 / 1.025	3 / 0.555	14 / 2.240	12 / 1.920	14 / 2.240	71 / 26.399	128 / 35.799

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	7	-	-	-	1	-	-	-	-	-	-	-	3	3	-	-	2	1	-	-	7	7	-	-	6	6	-	-	7	7	71	128
Out	4	-	-	-	3	-	1	-	-	-	-	-	-	3	3	-	-	2	1	-	-	7	7	-	-	6	6	-	-	85	128	

Method of Implementation (Organic): HB007 SOPV REPLACEMENT FIRST ARTICLES - Not Installed **Installation Quantity:** 2

Method of Implementation (Organic): DSA COST - Not Installed **Installation Quantity:** 71

Footnotes:

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Modification Number / Title: 2 / HB007 - SOPV REPLACEMENT

⁽⁹⁾ The FY11 cost is for two first articles and first article testing. First articles will not be installed.

⁽¹⁰⁾ Same contract provides motor-operated pilot valve requirements under HB002

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Modification Number / Title: 3 / HB009 - FIREFIGHTER ACCESS
---	---	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	7.558	0.124	-	0.474	-	0.474	-	-	-	-	-	8.156
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	7.558	0.124	-	0.474	-	0.474	-	-	-	-	-	8.156
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	7.558	0.124	-	0.474	-	0.474	-	-	-	-	-	8.156
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[HB009 FIREFIGHTER ACCESS] Funds the Firefighter Extraction System (FES) and Ladder Safety System (LSS) installation in the Main Machinery Room (MMR) and Auxiliary Machinery Room (AMR) escape trunks on LSD-41, LSD-49 and LPD-17 class hulls. The alterations consist of the installation of escape trunk ladder safety rails used in conjunction with safety belts and lifting pad-eyes installed at the top of the escape trunks. The LSD41/49 classes have four escape trunks to be modified. The LPD-17 class have five trunks to be modified. The FES and LSS will be installed and weight tested via a coordinated effort between the Alteration Installation Team (AIT), NSWC Panama City, and NSWCCD Code 668. Ship's force training will be provided by representatives from NSWC Panama City, FL. Government Furnished Material will also be provided to the AIT by NSWC Panama City, FL.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0910 / Firefighting Equipment					Modification Number / Title: 3 / HB009 - FIREFIGHTER ACCESS			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> HB009 - FIREFIGHTER ACCESS													
B Kits													
Recurring													
1.1.1) HB009 FIREFIGHTER ACCESS - NonOrganic	51 / 3.151	- / -	- / -	2 / 0.140	- / -	2 / 0.140	- / -	- / -	- / -	- / -	- / -	53 / 3.291	
<i>Subtotal: Recurring</i>	- / 3.151	- / -	- / -	- / 0.140	- / -	- / 0.140	- / -	- / -	- / -	- / -	- / -	- / 3.291	
<i>Subtotal: HB009 - FIREFIGHTER ACCESS</i>	51 / 3.151	- / -	- / -	2 / 0.140	- / -	2 / 0.140	- / -	- / -	- / -	- / -	- / -	53 / 3.291	
<i>Subtotal: Procurement, All Modification Items</i>	- / 3.151	- / -	- / -	- / 0.140	- / -	- / 0.140	- / -	- / -	- / -	- / -	- / -	- / 3.291	
Installation													
<i>Modification Item 1 of 1:</i> HB009 - FIREFIGHTER ACCESS													
<i>Subtotal: Installation</i>	- / 4.407	- / 0.124	- / -	- / 0.334	- / -	- / 0.334	- / -	- / -	- / -	- / -	- / -	- / 4.865	
Total													
Total Cost (Procurement + Support + Installation)	7.558	0.124	-	0.474	-	0.474	-	-	-	-	-	8.156	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0910 / Firefighting Equipment	Modification Number / Title: 3 / HB009 - FIREFIGHTER ACCESS

Modification Item 1 of 1: HB009 - FIREFIGHTER ACCESS

Manufacturer Information

Manufacturer Name: SELSTROM MAN	Manufacturer Location: PALATINE, IL
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 3

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Jan 2018				
Delivery Dates			Apr 2018				

Installation Information

Method of Implementation: AIT:: Installation Name: HB009 FIREFIGHTER ACCESS

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	50 / 4.407	1 / 0.124	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	51 / 4.531
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	2 / 0.334	- / -	2 / 0.334	- / -	- / -	- / -	- / -	- / -	2 / 0.334
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	50 / 4.407	1 / 0.124	- / -	2 / 0.334	- / -	2 / 0.334	- / -	- / -	- / -	- / -	- / -	53 / 4.865

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	50	-	1	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53
Out	50	-	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0925 / Command and Control Switchboard

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	64.762	2.219	2.255	2.140	-	2.140	2.242	2.300	2.350	2.405	-	80.673
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	64.762	2.219	2.255	2.140	-	2.140	2.242	2.300	2.350	2.405	-	80.673
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	64.762	2.219	2.255	2.140	-	2.140	2.242	2.300	2.350	2.405	-	80.673

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The switchboard program provides mission critical switching capability required to link shipboard combat equipment including weapons, launchers, sensors, computers and navigation equipment. In essence, switchboards serve as the central connection point for most elements of combat and weapon systems, interior communications, data transfer, and command and control systems. They are designed to accommodate either analog, digital interfaces, or a combination of both. In total, this budget item supports approximately 200 ships and 1,000 pieces of equipment throughout the acquisition life cycle.

Functions include: data routing; action cutout; test and operating mode selection (including casualty back-up modes); power monitoring and control; circuit protection; peripheral equipment isolation; and signal processing, frequency conversion amplification and switching. In summary, the primary purpose is to provide systems intra and interface compatibility.

Changes in other elements of the combat and Interior Communication (IC) systems will frequently mandate either conjunctive modification to switchboards via ship change documents (SCDs), ordnance alteration (ORDALT)/ field changes (FCs) or partial or complete replacement of existing switchboards. Typical switchboard mods include hardware/field change kits, ORDALT/SCD/FC instructions, technical manual updates and revisions to other supporting documentation. Hull unique switchboard configurations require hull unique documentation. Subsequent alterations to these switchboards require hull unique design, hardware, installation, and checkout procedures. New Switchboards are normally installed during a regular overhaul by a shipyard.

Command and control switchboards are currently installed on and are required for almost all surface combatants and amphibious warfare ships. Individual switchboard unit cost varies from ship to ship, depending upon size, complexity, and whether analog or digital interfaces or some combination thereof are utilized. Modifications to existing switchboards via Ship Alterations (SHIPALTs), SCDs, ORDALTs or FCs are quantified by kits or change packages rather than individual units. The number of kits required for different classes of ships are as follows: DDGs/CGs require three to four (3 - 4) per ship, LSDs require two (2) per ship, LPDs require one (1) per ship, MCMS

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0925 / Command and Control Switchboard
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>require (3) per ship and LHDs require two (2) per ship. The magnitude of modifications also varies, as Cruiser Modernization is considerably more complex than the Amphibious Class hulls. Switchboard hardware is normally procured by the Invitation For Bids (IFB) process, from manufacturers on Qualified Products List (QPL)-17000. There are currently six companies listed on QPL-17000. All contracts awarded are competitive, fixed price.</p> <p>[P40A / GE003 ENG UPGRADES/MODS TO EQUIPMENT & TECH DOCUMENTATION]: Combat Systems & Interior Communication Switchboard Engineering and Modifications Upgrades to Equipment, Drawings, Technical Manuals (TMs) Allowance Parts Lists (APLs) and Allowance Equipage Lists (AELs). This line covers the costs to upgrade/modify existing equipment and associated technical documentation to implement and validate upgraded switching configurations essential for the ships' switchboards to properly integrate all elements of the Combat System and Interior Communication interfaces. The upgraded engineering modification drives the procurement of hardware modification kits (i.e., ORDALTs & Field Changes). These engineering modifications are essential to the functional deployment of Battle Force Interoperability.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0925 / Command and Control Switchboard

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	COMMAND AND CONTROL SWITCHBOARD			- / 16.653	- / 1.744	- / 1.744	- / 1.545	- / -	- / 1.545
P-3a	1 / COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS (TBD)			- / 48.109	- / 0.475	- / 0.511	- / 0.595	- / -	- / 0.595
P-40	Total Gross/Weapon System Cost			- / 64.762	- / 2.219	- / 2.255	- / 2.140	- / -	- / 2.140

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	COMMAND AND CONTROL SWITCHBOARD			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS (TBD)			- / 0.560	- / 0.574	- / 0.614	- / 0.649	- / -	- / 52.087
P-40	Total Gross/Weapon System Cost			- / 2.242	- / 2.300	- / 2.350	- / 2.405	- / -	- / 80.673

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy														Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9						P-1 Line Item Number / Title: 0925 / Command and Control Switchboard						Aggregated Items Title: COMMAND AND CONTROL SWITCHBOARD							

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) GE003 ENG UPGRADES/MODS TO EQUIPMENT & TECH DOCUMENTATION																				
1.1) ENGINEERING UPGRADES/MODS TO EQUIPMENT & TECHNICAL DOCUMENTATION	A		-	-	16.653	-	-	1.744	-	-	1.744	-	-	1.545	-	-	-	-	-	1.545
Subtotal: 1) GE003 ENG UPGRADES/MODS TO EQUIPMENT & TECH DOCUMENTATION			-	-	16.653	-	-	1.744	-	-	1.744	-	-	1.545	-	-	-	-	-	1.545
Total			-	-	16.653	-	-	1.744	-	-	1.744	-	-	1.545	-	-	-	-	-	1.545

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0925 / Command and Control Switchboard				Modification Number / Title: 1 / COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	48.109	0.475	0.511	0.595	-	0.595	0.560	0.574	0.614	0.649	-	52.087
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	48.109	0.475	0.511	0.595	-	0.595	0.560	0.574	0.614	0.649	-	52.087
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	48.109	0.475	0.511	0.595	-	0.595	0.560	0.574	0.614	0.649	-	52.087
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Combat Systems & Interior Communication Switchboard Engineering and Modifications Upgrades to Equipment, Drawings, Technical Manuals (TMs) Allowance Parts Lists (APLs) and Allowance Equipage Lists (AELs). This line covers the costs to upgrade/modify existing equipment and associated technical documentation to implement and validate upgraded switching configurations essential for the ships' switchboards to properly integrate all elements of the Combat System and Interior Communication interfaces. The upgraded engineering modification drives the procurement of hardware modification kits (i.e., ORDALTs & Field Changes). These engineering modifications are essential to the functional deployment of Battle Force Interoperability.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0925 / Command and Control Switchboard						Modification Number / Title: 1 / COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS		
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	<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>
Procurement												
<i>Modification Item 1 of 1: COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS</i>												
B Kits												
Recurring												
1.1.1 Ordalt/Field Change Kits - NonOrganic ⁽¹⁾	103 / 48.109	15 / 0.475	17 / 0.511	16 / 0.595	- / -	16 / 0.595	14 / 0.560	14 / 0.574	14 / 0.614	14 / 0.649	- / -	207 / 52.087
<i>Subtotal: Recurring</i>	- / 48.109	- / 0.475	- / 0.511	- / 0.595	- / -	- / 0.595	- / 0.560	- / 0.574	- / 0.614	- / 0.649	- / -	- / 52.087
<i>Subtotal: COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS</i>	103 / 48.109	15 / 0.475	17 / 0.511	16 / 0.595	- / -	16 / 0.595	14 / 0.560	14 / 0.574	14 / 0.614	14 / 0.649	- / -	207 / 52.087
<i>Subtotal: Procurement, All Modification Items</i>	- / 48.109	- / 0.475	- / 0.511	- / 0.595	- / -	- / 0.595	- / 0.560	- / 0.574	- / 0.614	- / 0.649	- / -	- / 52.087
Installation												
<i>Modification Item 1 of 1: COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS</i>												
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	48.109	0.475	0.511	0.595	-	0.595	0.560	0.574	0.614	0.649	-	52.087

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0925 / Command and Control Switchboard	Modification Number / Title: 1 / COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS

Modification Item 1 of 1: COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS

Manufacturer Information

Manufacturer Name: CACI	Manufacturer Location: OXNARD, CA
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 1

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Manufacturer Name: Valkyrie	Manufacturer Location: Oxnard, CA
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 1

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Dec 2014	Dec 2015	Dec 2016	Nov 2017	Nov 2018	Nov 2019	Nov 2020
Delivery Dates	Jan 2015	Jan 2016	Jan 2017	Dec 2017	Dec 2018	Dec 2019	Dec 2020

Installation Information

Method of Implementation: AIT:: Installation Name: Ordalt/Field Change Kits

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	103 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	103 / -
FY 2015	- / -	15 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / -
FY 2016	- / -	- / -	17 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / -
FY 2017	- / -	- / -	- / -	16 / -	- / -	16 / -	- / -	- / -	- / -	- / -	- / -	16 / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	14 / -	- / -	- / -	- / -	- / -	14 / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / -	- / -	- / -	- / -	14 / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / -	- / -	- / -	14 / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / -	- / -	14 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	103 / 0.000	15 / -	17 / -	16 / -	- / -	16 / -	14 / -	14 / -	14 / -	14 / -	- / -	207 / -

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	103	-	5	5	5	-	3	5	9	2	6	4	4	-	4	3	7	8	1	3	2	6	3	3	2	6	3	3	2	-	207
Out	103	-	5	5	5	-	3	5	9	2	6	4	4	-	4	3	7	8	1	3	2	6	3	3	2	6	3	3	2	-	207

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0925 / Command and Control Switchboard	Modification Number / Title: 1 / COMMAND AND CONTROL ORDALT/FIELD CHANGE KITS

Footnotes:

⁽¹⁾ FY 2016 funding is for the procurement of 17 units to be installed on the following ship classes: 1 CG-class (3 units), 3 DDG-class (6 units), 1 LSD-Class (2 units) and 2 MCM-Class (6 units). FY 2017 funding is for the procurement of 16 units to be installed on the following ship classes: 1 CG-class (3 units), 2 DDG-class (4 units), 1 LSD-Class (2 units), 1 LPD-Class (1 units) and 2 MCM-Class (6 units).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	6.350	13.826	26.545	24.939	-	24.939	25.639	26.027	27.701	28.261	17.138	196.426
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	6.350	13.826	26.545	24.939	-	24.939	25.639	26.027	27.701	28.261	17.138	196.426
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	6.350	13.826	26.545	24.939	-	24.939	25.639	26.027	27.701	28.261	17.138	196.426

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2015 funding request was reduced \$0.222 million in support of other priorities within the Department.

The FY 2016 funding request was reduced \$2.026 million to account for VSD Fire Pump ahead of need.

The FY 2017 funding request was reduced by \$2.413 million to account for the availability of prior year execution balances.

Funding provides for the procurement of High Efficiency Small-Capacity (HES-C) Air Conditioning Compressors and Brushless Generators for the Power Management Platform (PMP) for the LHD Midlife Program. HES-C provides additional air conditioning capability to support growing electronic cooling requirements. The Brushless Generator replacement will reduce down time, total ownership costs, and maintenance costs associated with antiquated brush type generators. Additionally replaces obsolete main feed pump for the main propulsion boiler, and replaces steam driven fire pumps with variable speed drive (VSD) electric fire pumps eliminating a current major maintenance driver.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0933 / LHA/LHD Midlife

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / LH001 - LHD Midlife, Brushless Generator for PMP (TBD)			- / 6.350	- / 13.826	- / 17.060	- / 18.873	- / -	- / 18.873
P-3a	2 / LH001 - LHD Midlife HVAC IMPROVEMENTS (HESC) (TBD)			- / 0.000	- / -	- / 1.557	- / 2.758	- / -	- / 2.758
P-3a	3 / LH001 - Main Feed Pump (TBD)			- / 0.000	- / -	- / 0.845	- / 3.308	- / -	- / 3.308
P-3a	4 / LH001 - VSD Fire Pump (TBD)			- / 0.000	- / -	- / 7.083	- / -	- / -	- / -
P-3a	5 / Reverse Osmosis (TBD)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 6.350	- / 13.826	- / 26.545	- / 24.939	- / -	- / 24.939

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / LH001 - LHD Midlife, Brushless Generator for PMP (TBD)			- / 16.547	- / 9.535	- / 9.011	- / 16.295	- / 8.412	- / 115.909
P-3a	2 / LH001 - LHD Midlife HVAC IMPROVEMENTS (HESC) (TBD)			- / 6.786	- / 9.235	- / 12.085	- / 11.412	- / 8.726	- / 52.559
P-3a	3 / LH001 - Main Feed Pump (TBD)			- / 2.306	- / 2.900	- / 2.008	- / -	- / -	- / 11.367
P-3a	4 / LH001 - VSD Fire Pump (TBD)			- / -	- / -	- / -	- / -	- / -	- / 7.083
P-3a	5 / Reverse Osmosis (TBD)			- / -	- / 4.357	- / 4.597	- / 0.554	- / -	- / 9.508
P-40	Total Gross/Weapon System Cost			- / 25.639	- / 26.027	- / 27.701	- / 28.261	- / 17.138	- / 196.426

*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.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife				Modification Number / Title: 1 / LH001 - LHD Midlife, Brushless Generator for PMP				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	6.350	13.826	17.060	18.873	-	18.873	16.547	9.535	9.011	16.295	8.412	115.909
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	6.350	13.826	17.060	18.873	-	18.873	16.547	9.535	9.011	16.295	8.412	115.909
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	6.350	13.826	17.060	18.873	-	18.873	16.547	9.535	9.011	16.295	8.412	115.909
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Brushless Generator replacement will reduce down time, total ownership costs, and maintenance costs associated with antiquated brush type generators.

-Five (5) Generators are required to complete a shipset; The FY2015 procurement funding includes one shipset (5 generators) and one additional generator (1 generator) to be used for engineering testing (shock and vibration, etc).

-The FY2016 and FY2017 procurement funding includes only one shipset (5 generators).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife					Modification Number / Title: 1 / LH001 - LHD Midlife, Brushless Generator for PMP			
Models of Systems Affected: LHD Midlife PMP				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: LH001 - LHD Midlife, Brushless Generator for PMP</i>													
B Kits													
Recurring													
1.1.1) Brushless Generator for PMP - NonOrganic ⁽¹⁾	- / -	1 / 7.479	1 / 5.720	1 / 5.834	- / -	1 / 5.834	1 / 6.073	- / -	1 / 6.192	1 / 6.317	- / -	6 / 37.615	
<i>Subtotal: Recurring</i>	- / 0.000	- / 7.479	- / 5.720	- / 5.834	- / -	- / 5.834	- / 6.073	- / -	- / 6.192	- / 6.317	- / -	- / 37.615	
<i>Subtotal: LH001 - LHD Midlife, Brushless Generator for PMP</i>	- / -	1 / 7.479	1 / 5.720	1 / 5.834	- / -	1 / 5.834	1 / 6.073	- / -	1 / 6.192	1 / 6.317	- / -	6 / 37.615	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 7.479	- / 5.720	- / 5.834	- / -	- / 5.834	- / 6.073	- / -	- / 6.192	- / 6.317	- / -	- / 37.615	
Support (All Modification Items)													
2.1) Non-Recurring Engineering	- / 6.350	- / 3.847	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.197	
<i>Subtotal: Support</i>	- / 6.350	- / 3.847	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.197	
Installation													
<i>Modification Item 1 of 1: LH001 - LHD Midlife, Brushless Generator for PMP</i>	- / 0.000	- / 2.500	- / 11.340	- / 13.039	- / -	- / 13.039	- / 10.474	- / 9.535	- / 2.819	- / 9.978	- / 8.412	- / 68.097	
<i>Subtotal: Installation</i>	- / 0.000	- / 2.500	- / 11.340	- / 13.039	- / -	- / 13.039	- / 10.474	- / 9.535	- / 2.819	- / 9.978	- / 8.412	- / 68.097	
Total													
Total Cost (Procurement + Support + Installation)	6.350	13.826	17.060	18.873	-	18.873	16.547	9.535	9.011	16.295	8.412	115.909	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 1 / LH001 - LHD Midlife, Brushless Generator for PMP

Modification Item 1 of 1: LH001 - LHD Midlife, Brushless Generator for PMP

Manufacturer Information

Manufacturer Name: KATO ENGINEERING	Manufacturer Location: MN
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Dec 2014	Jul 2016	Nov 2016	Mar 2018		Jan 2020	Jun 2021
Delivery Dates	Dec 2015	Jul 2017	Nov 2017	Mar 2019		Jan 2021	Jun 2022

Installation Information

Method of Implementation: AIT/Industrial:: Installation Name: Brushless Generator for PMP

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / 2.500	1 / 8.540	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 11.040
FY 2016	- / -	- / -	- / 2.800	1 / 9.339	- / -	1 / 9.339	- / -	- / -	- / -	- / -	- / -	1 / 12.139
FY 2017	- / -	- / -	- / -	- / 2.700	- / -	- / 2.700	1 / 8.720	- / -	- / -	- / -	- / -	1 / 11.420
FY 2018	- / -	- / -	- / -	- / 1.000	- / -	- / 1.000	- / 1.754	1 / 8.482	- / -	- / -	- / -	1 / 11.236
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.053	- / 1.775	1 / 8.158	- / -	1 / 10.986
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.044	- / 1.820	1 / 8.412	1 / 11.276
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / 2.500	1 / 11.340	1 / 13.039	- / -	1 / 13.039	1 / 10.474	1 / 9.535	- / 2.819	1 / 9.978	1 / 8.412	6 / 68.097

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	1	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	1	6
Out	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	1	1	6

Footnotes:

(1) -FY15 and FY16 Procurement cost increase from the PB16 submission as a result of additional requirements identified during initial procurement contract award in FY15. Additional requirements driving the increase cost per shipset include dual voltage regulator enclosures, generator control unit enclosures, and couplings. - FY 2016 Install costs increase significantly over PB16 cost due to growth resulting from multiple shipchecks, progressing Ship Installations Drawings (SID) development, advanced planning and estimating for first-in-class FY 2016 install. The scope of Multi-Ship Multi-Option (MSMO) and Alterations Installation Team (AIT) installation efforts has also grown. -FY17 Brushless Generator install cost increased due to a change in the rigging path driven by actual passageway and compartment dimensions

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 1 / LH001 - LHD Midlife, Brushless Generator for PMP

captured during the ship check. Additional access cuts and interference removal are required. -Beginning in FY 2017, Design Services Allocation (DSA) costs are spread over two years prior to install due to new Firm Fixed Price contract strategy milestones.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife				Modification Number / Title: 2 / LH001 - LHD Midlife HVAC IMPROVEMENTS (HESC)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	1.557	2.758	-	2.758	6.786	9.235	12.085	11.412	8.726	52.559
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	1.557	2.758	-	2.758	6.786	9.235	12.085	11.412	8.726	52.559
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	1.557	2.758	-	2.758	6.786	9.235	12.085	11.412	8.726	52.559
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This ship alteration improves the Heating, Ventilation, and Air Conditioning (HVAC) capability for the LHD's as part of the LHD midlife.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife					Modification Number / Title: 2 / LH001 - LHD Midlife HVAC IMPROVEMENTS (HESC)			
Models of Systems Affected: LHD Midlife HVAC				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: LH001 - LHD Midlife HVAC IMPROVEMENTS (HESC)</i>													
B Kits													
Recurring													
1.1.1) HVAC IMPROVEMENTS (HESC) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.174	1 / 6.256	1 / 6.303	1 / 6.168	- / -	4 / 24.901	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 6.174	- / 6.256	- / 6.303	- / 6.168	- / -	- / 24.901	
<i>Subtotal: LH001 - LHD Midlife HVAC IMPROVEMENTS (HESC)</i>	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.174	1 / 6.256	1 / 6.303	1 / 6.168	- / -	4 / 24.901	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 6.174	- / 6.256	- / 6.303	- / 6.168	- / -	- / 24.901	
Support (All Modification Items)													
2.1) Engineering Services ⁽²⁾	- / -	- / -	- / 1.557	- / 2.758	- / -	- / 2.758	- / -	- / -	- / -	- / -	- / -	- / 4.315	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / 1.557	- / 2.758	- / -	- / 2.758	- / -	- / -	- / -	- / -	- / -	- / 4.315	
Installation													
<i>Modification Item 1 of 1: LH001 - LHD Midlife HVAC IMPROVEMENTS (HESC)</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.612	- / 2.979	- / 5.782	- / 5.244	- / 8.726	- / 23.343	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.612	- / 2.979	- / 5.782	- / 5.244	- / 8.726	- / 23.343	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	1.557	2.758	-	2.758	6.786	9.235	12.085	11.412	8.726	52.559	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 2 / LH001 - LHD Midlife HVAC IMPROVEMENTS (HESC)

Modification Item 1 of 1: LH001 - LHD Midlife HVAC IMPROVEMENTS (HESC)

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 24

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates				Oct 2017	Oct 2018	Jul 2020	May 2021
Delivery Dates				Oct 2019	Oct 2020	Jul 2022	May 2023

Installation Information

Method of Implementation: AIT:: Installation Name: HVAC IMPROVEMENTS (HESC)

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.612	- / 2.348	1 / 2.878	- / -	- / -	1 / 5.838
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.631	- / 2.290	1 / 2.896	- / -	1 / 5.817
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.614	- / 2.348	1 / 3.121	1 / 6.083
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.605	1 / 5.605
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.612	- / 2.979	1 / 5.782	1 / 5.244	2 / 8.726	4 / 23.343

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	2	4
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	2	4

Footnotes:
 (2) FY 2016 and FY 2017 funds are required for significant engineering services for Heating, Ventilation, and Air Conditioning (HVAC) improvements, which are required to resolve obsolescence issues in advance of the ship availability start in 1Q20.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 3 / LH001 - Main Feed Pump
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	0.845	3.308	-	3.308	2.306	2.900	2.008	-	-	11.367
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	0.845	3.308	-	3.308	2.306	2.900	2.008	-	-	11.367
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	0.845	3.308	-	3.308	2.306	2.900	2.008	-	-	11.367

(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:

[Main Feed Pump] Replacement of obsolete main feed pump with new shock qualified unit to meet service life.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife					Modification Number / Title: 3 / LH001 - Main Feed Pump			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: LH001 - Main Feed Pump</i>													
B Kits													
Recurring													
1.1.1) Main Feed Pump - NonOrganic ⁽³⁾	- / -	- / -	- / -	1 / 1.734	- / -	1 / 1.734	1 / 1.804	- / -	- / -	- / -	- / -	2 / 3.538	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 1.734	- / -	- / 1.734	- / 1.804	- / -	- / -	- / -	- / -	- / 3.538	
<i>Subtotal: LH001 - Main Feed Pump</i>	- / -	- / -	- / -	1 / 1.734	- / -	1 / 1.734	1 / 1.804	- / -	- / -	- / -	- / -	2 / 3.538	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 1.734	- / -	- / 1.734	- / 1.804	- / -	- / -	- / -	- / -	- / 3.538	
Support (All Modification Items)													
2.1) Non-Recurring Engineering	- / -	- / -	- / 0.845	- / 0.758	- / -	- / 0.758	- / -	- / -	- / -	- / -	- / -	- / 1.603	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / 0.845	- / 0.758	- / -	- / 0.758	- / -	- / -	- / -	- / -	- / -	- / 1.603	
Installation													
<i>Modification Item 1 of 1: LH001 - Main Feed Pump</i>	- / 0.000	- / -	- / -	- / 0.816	- / -	- / 0.816	- / 0.502	- / 2.900	- / 2.008	- / -	- / -	- / 6.226	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 0.816	- / -	- / 0.816	- / 0.502	- / 2.900	- / 2.008	- / -	- / -	- / 6.226	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	0.845	3.308	-	3.308	2.306	2.900	2.008	-	-	11.367	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 3 / LH001 - Main Feed Pump

Modification Item 1 of 1: LH001 - Main Feed Pump

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 20

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Aug 2017	Mar 2018			
Delivery Dates			Mar 2019	Oct 2019			

Installation Information

Method of Implementation: Industrial:: Installation Name: Main Feed Pump

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / 0.816	- / -	- / 0.816	- / 0.187	1 / 2.045	- / -	- / -	- / -	1 / 3.048
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.315	- / 0.855	1 / 2.008	- / -	- / -	1 / 3.178
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / 0.816	- / -	- / 0.816	- / 0.502	1 / 2.900	1 / 2.008	- / -	- / -	2 / 6.226

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-

Footnotes:

(3) -Beginning in FY 2017 DSA costs are spread over two years prior to install due to new Firm Fixed Price contract strategy milestones. Majority of DSA for FY19 install is required in FY17 due to Norfolk Naval Ship Yard (NNSY) planning yard workload limitations and new accelerated Firm Fixed Price contracting strategy milestones which required Ship Installation Drawings (SIDs) to be completed earlier than current Multi-Ship Multi-Option (MSMO) contracting milestones. Funding for Main Feed Pump DSA in FY17 will reduce risk to other high-priority LHD Mid-Life Alterations (Brushless Generator and HES-C) by level-loading Planning Yard workload.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 4 / LH001 - VSD Fire Pump
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	7.083	-	-	-	-	-	-	-	-	7.083
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	7.083	-	-	-	-	-	-	-	-	7.083
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	7.083	-	-	-	-	-	-	-	-	7.083
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[VSD Fire Pumps] Replace steam driven fire pumps with variable speed drive (VSD) electric fire pumps to support service life.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife						Modification Number / Title: 4 / LH001 - VSD Fire Pump			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: LH001 - VSD Fire Pump</i>													
B Kits													
Recurring													
1.1.1) VSD Fire Pumps - NonOrganic ⁽⁴⁾	- / -	- / -	1 / 2.028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.028	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 2.028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.028	
<i>Subtotal: LH001 - VSD Fire Pump</i>	- / -	- / -	1 / 2.028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.028	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 2.028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.028	
Installation													
<i>Modification Item 1 of 1: LH001 - VSD Fire Pump</i>	- / 0.000	- / -	- / 5.055	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.055	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 5.055	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.055	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	7.083	-	-	-	-	-	-	-	-	7.083	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 4 / LH001 - VSD Fire Pump

Modification Item 1 of 1: LH001 - VSD Fire Pump

Manufacturer Information

Manufacturer Name: EMS Development	Manufacturer Location: TBD
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 9

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Oct 2015					
Delivery Dates		Jul 2016					

Installation Information

Method of Implementation: Inudstrial:: Installation Name: VSD Fire Pumps

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	1 / 5.055	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.055
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 5.055	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.055

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

(4) FY 2016 congressional reduction of \$2.026M for VSD firepump ahead of need.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 5 / Reverse Osmosis
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	-	4.357	4.597	0.554	-	9.508
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	-	4.357	4.597	0.554	-	9.508
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	-	4.357	4.597	0.554	-	9.508

(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:

Provides additional water making capability to support crew water requirements and additional corrosion washdown in well deck.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife					Modification Number / Title: 5 / Reverse Osmosis			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: Reverse Osmosis</i>													
B Kits													
Recurring													
1.1.1) Reverse Osmosis - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.243	- / -	- / -	1 / 4.243	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.243	- / -	- / -	- / 4.243	
<i>Subtotal: Reverse Osmosis</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.243	- / -	- / -	1 / 4.243	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.243	- / -	- / -	- / 4.243	
Support (All Modification Items)													
2.1) Engineering Services ⁽⁵⁾	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.357	- / -	- / -	- / -	- / 4.357	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.357	- / -	- / -	- / -	- / 4.357	
Installation													
<i>Modification Item 1 of 1: Reverse Osmosis</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.354	- / 0.554	- / -	- / 0.908	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.354	- / 0.554	- / -	- / 0.908	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	-	4.357	4.597	0.554	-	9.508	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0933 / LHA/LHD Midlife	Modification Number / Title: 5 / Reverse Osmosis

Modification Item 1 of 1: Reverse Osmosis

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 24

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates						Mar 2020	
Delivery Dates						Mar 2022	

Installation Information

Method of Implementation: Industrial:: Installation Name: Reverse Osmosis

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.354	- / 0.554	1 / -	1 / 0.908
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.354	- / 0.554	1 / -	1 / 0.908

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1

Footnotes:
⁽⁵⁾ Engineering requirements for Reverse Osmosis (RO) unit in FY19 will fund engineering efforts in support of first planned RO unit installation. Efforts will include engineering analysis of prototype RO unit demo-at-sea, environmental qualification and development of field changes to improve system reliability or to correct shock testing deficiencies. Engineering deliverables include fully qualified production RO units, Integrated Logistics Support (ILS) products and training.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	27.037	21.025	8.631	-	-	-	-	-	-	-	-	56.693
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	27.037	21.025	8.631	-	-	-	-	-	-	-	-	56.693
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	27.037	21.025	8.631	-	-	-	-	-	-	-	-	56.693

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	0.158	0.022	-	-	-	-	-	-	-	-	0.180
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funds provide for the procurement and installation of equipment in support of LCC 19/20 Class Extended Service Life Program (ESLP) extending the service life of both platforms to 2039 service life (70 year service life). Prior years include LCC electrical improvements, including new switchboards and brushless Ship Service Turbine Generators (SSTGs), VS-50+ oil water separator for environmental protection, and a qualified propulsion shaft.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0934 / LCC 19/20 Extended Service Life Program

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	LCC 19/20 Extended Service Life Program	P-5a		- / 3.279	- / -	- / -	- / -	- / -	- / -
P-3a	1 / LD001 - LCC19 Ship Electrical Improvements (TBD)			- / 8.458	- / 12.026	- / 8.631	- / -	- / -	- / -
P-3a	2 / LD001 - LCC19 VS-50+Oil Water Separator. (TBD)			- / 1.800	- / 3.500	- / -	- / -	- / -	- / -
P-3a	3 / LD001 - LCC20 Electrical Improvements. (TBD)			- / 13.500	- / 5.499	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 27.037	- / 21.025	- / 8.631	- / -	- / -	- / -

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	LCC 19/20 Extended Service Life Program	P-5a		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / LD001 - LCC19 Ship Electrical Improvements (TBD)			- / -	- / -	- / -	- / -	- / -	- / 29.115
P-3a	2 / LD001 - LCC19 VS-50+Oil Water Separator. (TBD)			- / -	- / -	- / -	- / -	- / -	- / 5.300
P-3a	3 / LD001 - LCC20 Electrical Improvements. (TBD)			- / -	- / -	- / -	- / -	- / -	- / 18.999
P-40	Total Gross/Weapon System Cost			- / -	- / -	- / -	- / -	- / -	- / 56.693

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy														Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9						P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program						Aggregated Items Title: LCC 19/20 Extended Service Life Program							

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) LCC 20 Propulsion Main Shaft																				
1.1) LCC 20 Propulsion Main Shaft Battle Spare ^{(1)(t)}	A		3,279K	1	3.279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) LCC 20 Propulsion Main Shaft			-	-	3.279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	3.279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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⁾ Procures main shaft battle spare for rotatable repair pool.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9			P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program					Aggregated Items: LCC 19/20 Extended Service Life Program				
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) LCC 20 Propulsion Main Shaft												
1.1) LCC 20 Propulsion Main Shaft Battle Spare ⁽¹⁾		2014	VARIOUS / VARIOUS	C / TBD	MSC	Sep 2014	Sep 2017	1	3,279K	N		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program				Modification Number / Title: 1 / LD001 - LCC19 Ship Electrical Improvements				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	8.458	12.026	8.631	-	-	-	-	-	-	-	-	29.115
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	8.458	12.026	8.631	-	-	-	-	-	-	-	-	29.115
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	8.458	12.026	8.631	-	-	-	-	-	-	-	-	29.115
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides a ship set (3 total) of new brushless SSTGs. The 3 existing brushed SSTGs will be replaced with 3 new brushless SSTGs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program	Modification Number / Title: 1 / LD001 - LCC19 Ship Electrical Improvements

Models of Systems Affected: LCC19 Ship Electrical Improvements	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: LD001 - LCC19 Ship Electrical Improvements												
A Kits												
Recurring												
1.1.1) Ship Electrical Improvements - NonOrganic ⁽²⁾	1 / 7.708	2 / 8.826	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 16.534
Subtotal: Recurring	- / 7.708	- / 8.826	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.534
Subtotal: LD001 - LCC19 Ship Electrical Improvements	1 / 7.708	2 / 8.826	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 16.534
Subtotal: Procurement, All Modification Items	- / 7.708	- / 8.826	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.534

Installation

Modification Item 1 of 1: LD001 - LCC19 Ship Electrical Improvements	- / 0.750	- / 3.200	- / 8.631	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.581
Subtotal: Installation	- / 0.750	- / 3.200	- / 8.631	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.581

Total

Total Cost (Procurement + Support + Installation)	8.458	12.026	8.631	-	-	-	-	-	-	-	-	29.115
--	--------------	---------------	--------------	----------	----------	----------	----------	----------	----------	----------	----------	---------------

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program	Modification Number / Title: 1 / LD001 - LCC19 Ship Electrical Improvements

Modification Item 1 of 1: LD001 - LCC19 Ship Electrical Improvements

Manufacturer Information

Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 12			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Sep 2015						
Delivery Dates	Sep 2016						

Installation Information

Method of Implementation: AIT:: Installation Name: Ship Electrical Improvements

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	0 / 0.750	- / 1.400	1 / 2.877	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	1 / 5.027
FY 2015	- / -	- / 1.800	2 / 5.754	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 7.554
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.750	- / 3.200	3 / 8.631	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 12.581

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

(2) Procured a total of 3 SSTG System Upgrades for LCC 19 installation in FY 16.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program				Modification Number / Title: 2 / LD001 - LCC19 VS-50+Oil Water Separator.				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	1.800	3.500	-	-	-	-	-	-	-	-	-	5.300
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	1.800	3.500	-	-	-	-	-	-	-	-	-	5.300
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	1.800	3.500	-	-	-	-	-	-	-	-	-	5.300
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procurement and installation upgrade to USS BLUE RIDGE (LCC 19) environmental system in support of the Extended Service Life Program. Provides procurement and installation of a VS-50+ oil water separator system.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program	Modification Number / Title: 2 / LD001 - LCC19 VS-50+Oil Water Separator.

Models of Systems Affected: LCC19 VS-50+Oil Water Separator	Modification Type: TBD	Related RDT&E PEs:
--	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: LD001 - LCC19 VS-50+Oil Water Separator.												
B Kits												
Recurring												
1.1.1) VS-50+Oil Water Separator - NonOrganic	1 / 1.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.300
<i>Subtotal: Recurring</i>	- / 1.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.300
<i>Subtotal: LD001 - LCC19 VS-50+Oil Water Separator.</i>	1 / 1.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.300
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.300

Installation

Modification Item 1 of 1: LD001 - LCC19 VS-50+Oil Water Separator.	- / 0.500	- / 3.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.000
<i>Subtotal: Installation</i>	- / 0.500	- / 3.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.000

Total

Total Cost (Procurement + Support + Installation)	1.800	3.500	-	-	-	-	-	-	-	-	-	5.300
--	--------------	--------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	--------------

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program	Modification Number / Title: 2 / LD001 - LCC19 VS-50+Oil Water Separator.

Modification Item 1 of 1: LD001 - LCC19 VS-50+Oil Water Separator.

Manufacturer Information

Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 13			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: VS-50+Oil Water Separator

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	0 / 0.500	1 / 3.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	1 / 4.000
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.500	1 / 3.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.000

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot					
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program				Modification Number / Title: 3 / LD001 - LCC20 Electrical Improvements.				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	13.500	5.499	-	-	-	-	-	-	-	-	-	18.999
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	13.500	5.499	-	-	-	-	-	-	-	-	-	18.999
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	13.500	5.499	-	-	-	-	-	-	-	-	-	18.999

(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:

Procurement and installation of upgrade to USS MOUNT WHITNEY (LCC 20) electrical distribution system in support of the Extended Service Life Program. Procures and installs two Emergency Diesel Generators (EDGs).

Total effort consists of 3 EDGs. The first EDG for LCC 20 was procured in FY 2013 in Other Procurement, Navy Line Item 0981, Items Less than \$5 Million. FY 2014 funding from this line item will be used to install that EDG.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program	Modification Number / Title: 3 / LD001 - LCC20 Electrical Improvements.

Models of Systems Affected: LCC20 Electrical Improvement	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> LD001 - LCC20 Electrical Improvements.												
B Kits												
Recurring												
1.1.1) LCC20 Electrical Improvement - NonOrganic ⁽³⁾	2 / 6.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.500
<i>Subtotal: Recurring</i>	- / 6.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.500
<i>Subtotal: LD001 - LCC20 Electrical Improvements.</i>	2 / 6.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.500
<i>Subtotal: Procurement, All Modification Items</i>	- / 6.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.500
Installation												
<i>Modification Item 1 of 1:</i> LD001 - LCC20 Electrical Improvements.	- / 7.000	- / 5.499	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.499
<i>Subtotal: Installation</i>	- / 7.000	- / 5.499	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.499
Total												
Total Cost (Procurement + Support + Installation)	13.500	5.499	-	-	-	-	-	-	-	-	-	18.999

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0934 / LCC 19/20 Extended Service Life Program	Modification Number / Title: 3 / LD001 - LCC20 Electrical Improvements.

Modification Item 1 of 1: LD001 - LCC20 Electrical Improvements.

Manufacturer Information

Manufacturer Name: TBD ⁽⁴⁾	Manufacturer Location: TBD
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 6

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: LCC20 Electrical Improvement

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 7.000	2 / 5.499	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / 12.499
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 7.000	2 / 5.499	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 12.499

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:
⁽³⁾ EDGs procured in FY14 require approximately 4 month land based government testing post delivery. Procurement of two EDGs (6 month PLT) is in FY14 with install in FY14 and FY15.
⁽⁴⁾ Approximate 4 month land based government testing.

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0935 / Pollution Control Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	403.439	10.146	16.609	20.191	-	20.191	20.417	20.155	23.456	24.344	-	538.757
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	403.439	10.146	16.609	20.191	-	20.191	20.417	20.155	23.456	24.344	-	538.757
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	403.439	10.146	16.609	20.191	-	20.191	20.417	20.155	23.456	24.344	-	538.757

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	0.353	0.206	0.078	-	0.078	0.089	0.031	-	-	-	0.757
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Decrease in Pollution Control Equipment by \$0.84M as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

The increase from FY 2016 to FY 2017 in cost element HF 031 Pollution Control Equipment Field Changes supports initiation of Oil Pollution Abatement (OPA) installations on Surface Ship Combatants and achieving full rate installation of OPA improvements on Expeditionary Warfare Class ships. Specifically, the OPA system improvements address the Top Management Attention/Top Management Initiative ship change documents to correct critical design and material deficiencies, enable system certification, improve system reliability, maintainability and operational availability.

POLLUTION CONTROL SYSTEMS/EQUIPMENT: This item provides funds for the procurement of pollution control systems and equipment that are required by Navy ships in order for them to comply with international regulations, federal laws, DOD Directives and Navy environmental protection regulations. These regulations, laws and directives restrict the discharge of oily waste, sewage, solid waste, plastic waste, medical waste and hazardous waste. Most of these applicable regulations require Navy ships to comply by fixed deadlines. Failure to comply carries potential personal, civil, and criminal liability, and significantly imposes constraints on the operational capabilities of Navy ships. In some instances, the compliance schedule has required an acceleration of the normal schedules in the procurement process.

SHORE BASED POLLUTION EQUIPMENT - (Logistics)

The Shorebased funds provide for equipment required to clean up Navy oil spills on the open sea as required by the Federal Waste Pollution Control Act - Public Law 92-500. The law created a National Oil and Hazardous Substance Pollution Contingency Plan, and designates the Department of Defense as one of the primary agencies responsible for promotion of effective operation of the plan. The Supervisor of Salvage is assigned the responsibility to provide technical expertise, resources, and equipment for cleaning Navy-originated spills of oil and other hazardous material in coastal waters or the open sea. Major items of procurement are:

[P40A / HF040 FIELD SUPPORT SYSTEMS]: HF040 - FIELD SUPPORT SYSTEMS These systems include those auxiliary support systems required to keep the oil spill responders operating in the field during an emergency response. These systems include various equipment and vessels required for command and control, communication, supply, personnel transfer, global positioning system (GPS) asset tracking, repair, towing, deployment, demobilization, and other ancillary requirements of an oil spill response operation. All of these systems range greatly in unit cost depending on which system is procured (i.e., satellite phone versus vessels/boats).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0935 / Pollution Control Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / HF051 OIL BOOM SYSTEMS]: HF051 - OIL BOOM SYSTEMS These systems consist of inflatable or hard oil booms of various sizes (18 inch, 26 inch, 42 inch) based on the federal requirements for Oil Spill Response Organizations (OSROs), which range in unit cost based on size and type. These systems include all associated equipment required to store, inflate, deploy, recover, and repair the boom. All inflatable boom systems also include shoreline transition booms to cross the beach/breaker area. The systems are packaged in 8' x 8' x 20' shipping containers.</p> <p>[P40A / HF055 SALVAGE SUPPORT SYSTEMS]: HF055 - SALVAGE SUPPORT SYSTEMS These systems are a collection of small, special-purpose skimmers, dispersant spray systems, containment booms, shoreline transition booms, transfer pumps, storage tanks, sorbents, and ancillary equipment intended as a stand-alone response package for small, salvage-related spills inside and adjacent to ships or inland locations, or special remote tanker offloading locations.</p> <p>[P40A / HF056 EQUIPMENT CLEAN-UP SYSTEMS]: HF056 - EQUIPMENT CLEAN-UP SYSTEMS These systems provide a full array of tools and materials required to perform the extensive decontamination needed for response assets and personnel during an operation and prior to demobilization once a spill has concluded.</p> <p>[P40A / HF057 OIL HANDLING SYSTEMS]: HF057 - OIL HANDLING SYSTEMS Oil handling systems are used to assist in disposal of removed oil and debris. These systems include: vacuum systems, floating hose systems, temporary oil storage bladders, transfer pumping systems, debris handling systems including portable crane systems, incinerator systems, oil/water separator systems, steam generator systems, water injection systems and other material transfer systems. These different systems can range greatly in unit cost based on whether commercial off-the-shelf items or custom built.</p> <p>[P40A / HF062 LIGHTERING SYSTEMS]: HF062 - LIGHTERING SYSTEMS These systems allow for lightering of oil from aboard ships whose transfer systems are inoperative. Various pump sizes and extraction tools selected can pump oil product in almost any emergency scenario. These pumping systems are designed to move large quantities of oil or other hazardous substances, including oil that has been weathered, emulsified, or mixed with other contaminants and become thick and viscous. Unit costs vary depending on system configuration.</p> <p>[P40A / HF063 VOSS SKIMMER SYSTEMS]: HF063 - VESSEL OF OPPORTUNITY (VOSS) SKIMMING SYSTEMS The VOSS is an oil skimming system which can be used aboard any vessel with enough deck space to support the operating equipment. It allows for skimming capability in situations where traditional skimmers may not be practicable, such as offshore or in extremely inclement weather. These systems include the ancillary support equipment required to maintain skimmer operations onboard a vessel for an extended period of time.</p> <p>[P40A / HF067 - RAPID DEPLOYMENT SKIMMER SYSTEMS]: HF067 - RAPID DEPLOYMENT SKIMMER SYSTEMS These systems are self-propelled skimmers designed for near-shore and open ocean environments and are used in conjunction with containment boom for mechanical recovery of oil on the water. They are designed to be rapidly transportable to the scene of an oil spill.</p> <p>[P40A / HF031 POLLUTION CONTROL EQUIPMENT FIELD CHANGES]: HF031 - POLLUTION CONTROL EQUIPMENT FIELD CHANGES - Funds field changes for reliability and maintainability improvements and corrections of conventional pollution control equipment systems. Oil Pollution Abatement (OPA) Systems Improvements: Existing OPA systems have demonstrated poor operational availability, maintainability, and reliability. This comprehensive effort addresses the entire OPA system, from holding tanks to overboard discharge. The alterations needed to correct these design deficiencies are ship specific and may include, but are not limited to: installation of new tank level sensors; upgrades to the Oily Water Separator (OWS) and the Oil Content Monitor (OCM), correction of OWS suction problems, correction of OCM inlet & outlet piping including related of flush water piping configuration problems, and upgrade of oily waste transfer pump relief valve. LHD-1 Class upgrades include conversion of the existing OWS to the VS-50 OWS. DDG-51 through DDG-88 ships will receive the Oily Waste Membrane System to produce an effluent that meets the 15 ppm maximum oil discharge requirement.</p> <p>[P40A / HF830 PRODUCTION ENGINEERING]: HF830 PRODUCTION ENGINEERING: Air conditioning plant kit and software quality control, technical manual and complete conversion instruction revisions, technical reports based on investigative efforts of OEM quality assurance or obsolescence issues, and support equipment removal from inactive ships or other Navy assets. Development of technical manuals, Planned Maintenance System (PMS), Provisioning Technical Documentation (PTD), Program Support Data (PSD) and allowance Parts List (APLs), engineering to manage procurement and material, and in support of design reviews.</p> <p>[P3A / HF024 CFC-114 (R-114) AC CONVERSION]: HF024 - CFC CONVERSION PROGRAM The production of chlorofluorocarbon(CFC)-based refrigerants (including CFC-12 and CFC-114) was prohibited after 31 DEC 95 by the Clean Air Act of 1990. Presidential Executive Order 12843 of 21 APR 93 calls for federal agencies to "maximize the use of safe alternatives to ozone-depleting substances." OPNAVINST</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0935 / Pollution Control Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>5090.1C dated 30 OCT 2007 further requires to "reduce the use and emissions of (ozone-depleting substances) to the lowest achievable level." The Navy is currently dependent on CFC-based refrigerants for the mission-critical cooling of (1) vital electronics and weapon systems, (2) food and medical stowage, and (3) inhabited spaces aboard surface ships and submarines. To counter the immediate threat of production cessation on uninterrupted Fleet operations, DoD directed the Defense Logistics Agency to establish a stockpile of CFC-based refrigerants. The stockpile was sized to support Fleet operations until the last CFC-based systems are retired or converted to ozone-friendly refrigerants. This program procures and installs conversion kits on existing CFC-114 Air-Conditioning (A/C) plants onboard surface ships. The CFC-114 conversion programs began in FY 99 and is expected to complete in FY 21. The inventory objective for CFC-114 is 402.</p> <p>[P3A / HF024 CFC-114 (R-114) AC CONVERSION]: HF5IN - INSTALLATION OF EQUIPMENT Funding is for installation of equipment for the Fleet Modernization Program installations.</p> <p>HF6IN - INSTALLATION OF EQUIPMENT Funding is for installation of equipment for the Fleet Modernization Program installations.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Pollution Control Equipment	P-5a		- / 77.771	- / 4.760	- / 9.135	- / 17.535	- / -	- / 17.535
P-3a	1 / HF024 CFC-114 (R-114) AC CONVERSION (TBD)			- / 325.668	- / 5.386	- / 7.474	- / 2.656	- / -	- / 2.656
P-40	Total Gross/Weapon System Cost			- / 403.439	- / 10.146	- / 16.609	- / 20.191	- / -	- / 20.191

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Pollution Control Equipment	P-5a		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / HF024 CFC-114 (R-114) AC CONVERSION (TBD)			- / 5.125	- / 4.964	- / 4.853	- / 1.992	- / -	- / 358.118
P-40	Total Gross/Weapon System Cost			- / 20.417	- / 20.155	- / 23.456	- / 24.344	- / -	- / 538.757

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy																Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9						P-1 Line Item Number / Title: 0935 / Pollution Control Equipment						Aggregated Items Title: Pollution Control Equipment								
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) LOGISTICS																				
1.1) HF040 FIELD SUPPORT SYSTEMS ^(†)	A		284,285.71	42	11.940	351,857.14	7	2.463	296,800.00	10	2.968	359,667.00	6	2.158	-	-	-	359,667.00	6	2.158
1.2) HF051 OIL BOOM SYSTEMS ^(†)	A		379,137.93	29	10.995	71,500.00	10	0.715	92,500.00	4	0.370	-	-	-	-	-	-	-	-	-
1.3) HF055 SALVAGE SUPPORT SYSTEMS	A		397,000.00	4	1.588	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) HF057 OIL HANDLING SYSTEMS	A		290,142.86	7	2.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6) HF062 LIGHTERING SYSTEMS ^(†)	A		256,111.11	9	2.305	384,000.00	1	0.384	-	-	-	1,248K	1	1.248	-	-	-	1,248K	1	1.248
1.7) HF063 VOSS SKIMMER SYSTEMS ^(†)	A		310,166.67	12	3.722	-	-	-	31,250.00	8	0.250	-	-	-	-	-	-	-	-	-
Subtotal: 1) LOGISTICS			-	-	32.581	-	-	3.562	-	-	3.588	-	-	3.406	-	-	-	-	-	3.406
2) EXPEDITIONARY WARFARE																				
2.1) HF031 POLLUTION CONTROL EQUIPMENT FIELD CHANGES	A		-	-	9.445	-	-	-	-	-	2.534	-	-	6.136	-	-	-	-	-	6.136
2.2) HF830 PRODUCTION ENGINEERING	A		-	-	3.452	-	-	0.020	-	-	0.239	-	-	-	-	-	-	-	-	-
Subtotal: 2) EXPEDITIONARY WARFARE			-	-	12.897	-	-	0.020	-	-	2.773	-	-	6.136	-	-	-	-	-	6.136
3) SURFACE WARFARE																				
3.1) HF031 POLLUTION CONTROL EQUIPMENT FIELD CHANGES	A		-	-	20.908	-	-	-	-	-	1.503	-	-	6.921	-	-	-	-	-	6.921
3.2) HF830 PRODUCTION ENGINEERING	A		-	-	7.401	-	-	0.123	-	-	0.139	-	-	-	-	-	-	-	-	-
Subtotal: 3) SURFACE WARFARE			-	-	28.309	-	-	0.123	-	-	1.642	-	-	6.921	-	-	-	-	-	6.921
4) AIR WARFARE																				
4.1) HF031 POLLUTION CONTROL EQUIPMENT FIELD CHANGES	A		-	-	3.984	-	-	1.055	-	-	1.132	-	-	1.072	-	-	-	-	-	1.072

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0935 / Pollution Control Equipment	Aggregated Items Title: Pollution Control Equipment
---	--	---

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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: 4) AIR WARFARE			-	-	3.984	-	-	1.055	-	-	1.132	-	-	1.072	-	-	-	-	-	1.072
Total			-	-	77.771	-	-	4.760	-	-	9.135	-	-	17.535	-	-	-	-	-	17.535

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0935 / Pollution Control Equipment **Aggregated Items:** Pollution Control Equipment

Item Number / Title [DODIC]	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) LOGISTICS												
1.1) HF040 FIELD SUPPORT SYSTEMS		2014	Metal Craft Marine, Inc. / Cape Vincent NY	C / IDIQ	WASHINGTON, DC	Apr 2014	Feb 2015	4	341,500.00	Y		
1.1) HF040 FIELD SUPPORT SYSTEMS		2015	Metal Craft Marine, Inc. / Cape Vincent NY	C / IDIQ	WASHINGTON, DC	Mar 2015	Jan 2016	7	351,857.14	Y		
1.1) HF040 FIELD SUPPORT SYSTEMS		2016	Metal Craft Marine, Inc. / Cape Vincent NY	C / IDIQ	WASHINGTON, DC	Oct 2015	Aug 2016	10	296,800.00	Y		
1.1) HF040 FIELD SUPPORT SYSTEMS		2017	Metal Craft Marine, Inc. / Cape Vincent NY	C / IDIQ	WASHINGTON, DC	Oct 2016	Aug 2017	6	359,667.00	Y		
1.2) HF051 OIL BOOM SYSTEMS		2015	GPC / VA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	10	71,500.00	Y		
1.2) HF051 OIL BOOM SYSTEMS		2016	GPC / VA	C / CPAF	WASHINGTON, DC	Apr 2016	Apr 2017	4	92,500.00	Y		
1.6) HF062 LIGHTERING SYSTEMS		2015	GPC / VA	C / CPAF	WASHINGTON, DC	May 2015	Feb 2016	1	384,000.00	Y		
1.6) HF062 LIGHTERING SYSTEMS		2017	GPC / VA	C / CPAF	WASHINGTON, DC	Apr 2017	Jan 2018	1	1,248K	Y		
1.7) HF063 VOSS SKIMMER SYSTEMS		2013	GPC / VA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	3	300,000.00	Y		
1.7) HF063 VOSS SKIMMER SYSTEMS		2016	GPC / VA	C / CPAF	WASHINGTON, DC	Apr 2016	Apr 2017	8	31,250.00	Y		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0935 / Pollution Control Equipment				Modification Number / Title: 1 / HF024 CFC-114 (R-114) AC CONVERSION				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	325.668	5.386	7.474	2.656	-	2.656	5.125	4.964	4.853	1.992	-	358.118
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	325.668	5.386	7.474	2.656	-	2.656	5.125	4.964	4.853	1.992	-	358.118
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	325.668	5.386	7.474	2.656	-	2.656	5.125	4.964	4.853	1.992	-	358.118
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Navy is currently dependent on CFC-based refrigerants for the mission-critical cooling of (1) vital electronics and weapon systems, (2) food and medical stowage, and (3) inhabited spaces aboard surface ships and submarines. To counter the immediate threat of production cessation on uninterrupted Fleet operations, DoD directed the Defense Logistics Agency to establish a stockpile of CFC-based refrigerants. The stockpile was sized to support Fleet operations until the last CFC-based systems are retired or converted to ozone-friendly refrigerants. This program procures and installs conversion kits on existing CFC-114 Air-Conditioning (A/C) plants onboard surface ships. The CFC-114 conversion programs began in FY 99 and is expected to complete in FY 21. The inventory objective for CFC-114 is 402.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0935 / Pollution Control Equipment					Modification Number / Title: 1 / HF024 CFC-114 (R-114) AC CONVERSION			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1:</i> HF024 CFC-114 (R-114) AC CONVERSION													
B Kits													
Recurring													
1.1.1) HF024 CFC-114 (R-114) AC CONVERSION - NonOrganic ⁽¹⁾	375 / 146.188	4 / 2.317	5 / 3.430	- / -	- / -	- / -	6 / 5.125	2 / 1.734	4 / 3.566	- / -	6 / -	402 / 162.360	
<i>Subtotal: Recurring</i>	- / 146.188	- / 2.317	- / 3.430	- / -	- / -	- / -	- / 5.125	- / 1.734	- / 3.566	- / -	- / -	- / 162.360	
<i>Subtotal: HF024 CFC-114 (R-114) AC CONVERSION</i>	375 / 146.188	4 / 2.317	5 / 3.430	- / -	- / -	- / -	6 / 5.125	2 / 1.734	4 / 3.566	- / -	6 / -	402 / 162.360	
<i>Subtotal: Procurement, All Modification Items</i>	- / 146.188	- / 2.317	- / 3.430	- / -	- / -	- / -	- / 5.125	- / 1.734	- / 3.566	- / -	- / -	- / 162.360	
Installation													
<i>Modification Item 1 of 1:</i> HF024 CFC-114 (R-114) AC CONVERSION													
<i>Subtotal: Installation</i>	- / 179.480	- / 3.069	- / 4.044	- / 2.656	- / -	- / 2.656	- / -	- / 3.230	- / 1.287	- / 1.992	- / -	- / 195.758	
Total													
Total Cost (Procurement + Support + Installation)	325.668	5.386	7.474	2.656	-	2.656	5.125	4.964	4.853	1.992	-	358.118	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0935 / Pollution Control Equipment	Modification Number / Title: 1 / HF024 CFC-114 (R-114) AC CONVERSION

Modification Item 1 of 1: HF024 CFC-114 (R-114) AC CONVERSION

Manufacturer Information

Manufacturer Name: YORK INTERNATIONAL	Manufacturer Location: PA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Oct 2014	Oct 2015	Oct 2016	Oct 2017	Oct 2018	Oct 2019	
Delivery Dates	Oct 2015	Oct 2016	Oct 2017	Oct 2018	Oct 2019	Oct 2020	

Installation Information

Method of Implementation: AIT:: Installation Name: HF024 CFC-114 (R-114) AC CONVERSION

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	365 / 179.480	6 / 3.069	4 / 1.958	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	375 / 184.507
FY 2015	- / -	- / -	4 / 2.086	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.086
FY 2016	- / -	- / -	- / -	5 / 2.656	- / -	5 / 2.656	- / -	- / -	- / -	- / -	- / -	5 / 2.656
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 3.230	- / -	- / -	- / -	6 / 3.230
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.287	- / -	- / -	2 / 1.287
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.992	- / -	4 / 1.992
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / -	6 / -
Total	365 / 179.480	6 / 3.069	8 / 4.044	5 / 2.656	- / -	5 / 2.656	- / -	6 / 3.230	2 / 1.287	4 / 1.992	6 / -	402 / 195.758

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	365	-	2	4	-	2	-	6	-	-	2	-	3	-	-	-	-	-	6	-	-	-	2	-	-	-	-	4	-	6	402
Out	354	-	-	4	7	2	4	2	-	6	-	2	-	3	-	-	-	-	2	-	-	4	-	-	-	2	-	-	-	10	402

Footnotes:

(1) Average cost per unit in FY15 is lower than FY16-FY18 as result of utilization of reclaimed parts and equipment. Procurement contract is a three-year contract and FY18-FY21 procurements are estimated pending renegotiation.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0941 / Submarine Support Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	82.634	11.815	10.498	8.995	-	8.995	11.403	16.856	28.420	27.750	-	198.371
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	82.634	11.815	10.498	8.995	-	8.995	11.403	16.856	28.420	27.750	-	198.371
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	82.634	11.815	10.498	8.995	-	8.995	11.403	16.856	28.420	27.750	-	198.371

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Submarine Support Equipment budget provides funding for equipment technical refresh and upgrades that consist of hardware, software, system engineering, integrated logistics support, system test and evaluation, training, data, installation assistance teams and program management. This funding also procures equipment and material required to implement the military high priority Submarine Silencing Program for operating nuclear submarines. This equipment technical refreshes and upgrades are not supported by other NAVSEA program offices and support SSN/SSBN/SSGN Class Submarines and land based laboratories/facilities.

PB51N INSTALLATION

Funds are for the installation of SSTG Governors on SSN688, SSN21 and SSBN/GN 726 Class submarines, acoustic range array replacement, Ship Control System Processors replacement for SSN21 Class submarines and VA Acoustic Superiority improvement.

[P40A / PB002 SSN Component Upgrades]: PB002 VA Class Acoustic Superiority - Develop and procure Acoustic Superiority Program Block III/IV improvements for Virginia Class submarines.

[P40A / PB004 Facilities/Lab Upgrades]: PB004 ACOUSTIC RANGE EQUIPMENT

Procures equipment and materials required to implement and support the military high priority Submarine Silencing Program for operating nuclear submarines. TYCOMs have consistently rated the conduct of noise trials as a high priority funding requirement. The requirements for this program are identified in Chief of Naval Operations (CNO) Specific Operational Requirements (SOR) 46-28 and Naval Sea Systems Instruction (NAVSEAINST) C9073.2B. This is the only program in place to procure equipment for the purpose of measuring, monitoring, assessing and improving the detection capability and reducing the detectability of deployed submarines. The equipment is used on test vessels, listening platforms and at the laboratories. This program replaces or refurbishes broken or obsolete acquisition and analysis hardware and software used to ensure ship's safety; and the execution and completion of acoustic trials objectives identified in CNO SOR 46-28 (assessment of ship's acoustic posture, etc.) and NAVSEAINST C9073.2B (Acoustic Surveys Policy). These refurbishments and replacements are especially critical in order to maintain the technological advances recently made in the area of acoustic data acquisition under the Acoustic Measurement Facilities Improvement Program (AMFIP) and to utilize the South Tongue of the Ocean Acoustic Facility (STAFAC). Specific items include hydrophone arrays, towed arrays, ranging and tracking systems, on-board array electronics, noise sources, shore power cables, data fiber optic cables, data analysis systems, workstations, data storage and retrieval, communications systems, analyzers, tape recorders, accelerometers, monitors, etc.

[P3A / PB002 VA ACOUSTIC SUPERIORITY]: Develop and procure Acoustic Superiority improvements for on Virginia Class submarines.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0941 / Submarine Support Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P3A - 3 / PB007 SSN21 CL SC PROCESSING UNIT]: PB007 This shipalt will replace SSN 21 Class submarine ship control processing unit. The ship control processors are obsolete and contain electronic components that are no longer supported by industry.</p> <p>[P3A - 4 / PB008 SSTG GOVERNORS SEAWOLF CLASS]: PB008 - This shipalt will replace SSTG Governors in SEAWOLF Class submarines. The SSTG Governors in these submarines are obsolete and contain electronic components that are no longer supported by industry.</p> <p>[P3A - 5 / PB008 MOD 25]: PB008 - This shipalt will replace SSTG Governors in Mod 25 Los Angeles Class submarines. The SSTG Governors in theses submarines are obsolete and contain electronic components that are no longer supported by industry.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0941 / Submarine Support Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Submarine Support Equipment			- / 80.702	- / 5.276	- / 6.752	- / 8.722	- / -	- / 8.722
P-3a	1 / PB002 VA ACOUSTIC SUPERIORITY (TBD)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-3a	2 / PB004 ACOUSTIC ARRAY (TBD)			- / 0.000	- / 6.539	- / 3.010	- / -	- / -	- / -
P-3a	3 / PB007 SSN21 CL SC PROCESSING UNIT (TBD)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-3a	4 / PB008 SSTG GOVERNORS SEAWOLF CLASS (TBD)			- / 1.932	- / -	- / 0.736	- / 0.273	- / -	- / 0.273
P-3a	5 / PB008 MOD 25 (TBD)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 82.634	- / 11.815	- / 10.498	- / 8.995	- / -	- / 8.995

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Submarine Support Equipment			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / PB002 VA ACOUSTIC SUPERIORITY (TBD)			- / -	- / -	- / 22.176	- / 21.380	- / -	- / 43.556
P-3a	2 / PB004 ACOUSTIC ARRAY (TBD)			- / -	- / -	- / -	- / -	- / -	- / 9.549
P-3a	3 / PB007 SSN21 CL SC PROCESSING UNIT (TBD)			- / 1.039	- / -	- / -	- / -	- / -	- / 1.039
P-3a	4 / PB008 SSTG GOVERNORS SEAWOLF CLASS (TBD)			- / -	- / -	- / -	- / -	- / -	- / 2.941
P-3a	5 / PB008 MOD 25 (TBD)			- / 2.000	- / 1.539	- / 0.265	- / -	- / -	- / 3.804
P-40	Total Gross/Weapon System Cost			- / 11.403	- / 16.856	- / 28.420	- / 27.750	- / -	- / 198.371

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0941 / Submarine Support Equipment **Aggregated Items Title:** Submarine Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) PB004 Facilities/Lab Upgrades																				
2.1) Acoustic Range Replacement Equipment	A		-	-	52.002	-	-	1.142	-	-	2.925	-	-	3.406	-	-	-	-	-	3.406
Subtotal: 2) PB004 Facilities/Lab Upgrades			-	-	52.002	-	-	1.142	-	-	2.925	-	-	3.406	-	-	-	-	-	3.406
3) PB007 SSN/SSBN HM&E Threshold Modernization ⁽¹⁾																				
3.2) SSN 21 CL SC Proc Design & Dev	A		-	-	15.114	-	-	4.134	-	-	3.492	-	-	2.824	-	-	-	-	-	2.824
Subtotal: 3) PB007 SSN/SSBN HM&E Threshold Modernization			-	-	15.114	-	-	4.134	-	-	3.492	-	-	2.824	-	-	-	-	-	2.824
4) PB008 SSTG Governors																				
4.1) Design and Shipalt Development Ohio/LA/Seawolf Class	A		-	-	13.586	-	-	-	-	-	0.335	-	-	2.492	-	-	-	-	-	2.492
Subtotal: 4) PB008 SSTG Governors			-	-	13.586	-	-	-	-	-	0.335	-	-	2.492	-	-	-	-	-	2.492
Total			-	-	80.702	-	-	5.276	-	-	6.752	-	-	8.722	-	-	-	-	-	8.722

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

Footnotes:

⁽¹⁾ PB007 This shipalt will replace SSN 21 Class submarine ship control processing unit. The ship control processors are obsolete and contain electronic components that are no longer supported by industry.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0941 / Submarine Support Equipment				Modification Number / Title: 1 / PB002 VA ACOUSTIC SUPERIORITY				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	-	-	22.176	21.380	-	43.556
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	-	-	22.176	21.380	-	43.556
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	-	-	22.176	21.380	-	43.556
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Develop and procure Acoustic Superiority improvements for on Virginia Class submarines.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0941 / Submarine Support Equipment					Modification Number / Title: 1 / PB002 VA ACOUSTIC SUPERIORITY			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1:</i> PB002 VA ACOUSTIC SUPERIORITY													
B Kits													
Recurring													
1.1.1) VA Acoustic Superiority - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.545	1 / 5.345	- / -	2 / 10.890	
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 5.545</i>	<i>- / 5.345</i>	<i>- / -</i>	<i>- / 10.890</i>	
<i>Subtotal: PB002 VA ACOUSTIC SUPERIORITY</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1 / 5.545</i>	<i>1 / 5.345</i>	<i>- / -</i>	<i>2 / 10.890</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 5.545</i>	<i>- / 5.345</i>	<i>- / -</i>	<i>- / 10.890</i>	
Installation													
<i>Modification Item 1 of 1:</i> PB002 VA ACOUSTIC SUPERIORITY													
<i>Subtotal: Installation</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 16.631</i>	<i>- / 16.035</i>	<i>- / -</i>	<i>- / 32.666</i>	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	-	-	22.176	21.380	-	43.556	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Modification Number / Title: 1 / PB002 VA ACOUSTIC SUPERIORITY

Modification Item 1 of 1: PB002 VA ACOUSTIC SUPERIORITY

Manufacturer Information

Manufacturer Name: New MFG - Name	Manufacturer Location: New MFG - Loc
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 8

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates						Nov 2019	Nov 2020
Delivery Dates						Jul 2020	Jul 2021

Installation Information

Method of Implementation: [none specified]:: Installation Name: VA Acoustic Superiority

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 16.631	- / -	- / -	1 / 16.631
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 16.035	- / -	1 / 16.035
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 16.631	1 / 16.035	- / -	2 / 32.666

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	2
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	2

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Modification Number / Title: 2 / PB004 ACOUSTIC ARRAY
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	6.539	3.010	-	-	-	-	-	-	-	-	9.549
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	6.539	3.010	-	-	-	-	-	-	-	-	9.549
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	6.539	3.010	-	-	-	-	-	-	-	-	9.549
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funds provide for submerged North Acoustic Array procurement and installation at STAFAC.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0941 / Submarine Support Equipment					Modification Number / Title: 2 / PB004 ACOUSTIC ARRAY			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: PB004 ACOUSTIC ARRAY</i>													
B Kits													
Non-Recurring													
1.1.1) PB004 ACOUSTIC ARRAY - NonOrganic	- / -	1 / 3.461	1 / 0.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.140	
<i>Subtotal: Non-Recurring</i>	- / 0.000	- / 3.461	- / 0.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.140	
<i>Subtotal: PB004 ACOUSTIC ARRAY</i>	- / -	1 / 3.461	1 / 0.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.140	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 3.461	- / 0.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.140	
Installation													
<i>Modification Item 1 of 1: PB004 ACOUSTIC ARRAY</i>	- / 0.000	- / 3.078	- / 2.331	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.409	
<i>Subtotal: Installation</i>	- / 0.000	- / 3.078	- / 2.331	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.409	
Total													
Total Cost (Procurement + Support + Installation)	0.000	6.539	3.010	-	-	-	-	-	-	-	-	9.549	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Modification Number / Title: 2 / PB004 ACOUSTIC ARRAY

Modification Item 1 of 1: PB004 ACOUSTIC ARRAY

Manufacturer Information

Manufacturer Name: NSWC CD	Manufacturer Location: BETHESDA, MD
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 5

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Apr 2015	Jan 2016					
Delivery Dates	Aug 2015	Jun 2016					

Installation Information

Method of Implementation: [none specified]:: Installation Name: PB004 ACOUSTIC ARRAY

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	1 / 3.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.078
FY 2016	- / -	- / -	1 / 2.331	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.331
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	1 / 3.078	1 / 2.331	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 5.409

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0941 / Submarine Support Equipment				Modification Number / Title: 3 / PB007 SSN21 CL SC PROCESSING UNIT				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	1.039	-	-	-	-	1.039
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	1.039	-	-	-	-	1.039
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	1.039	-	-	-	-	1.039
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

PB007 This shipalt will replace SSN 21 Class submarine ship control processing unit. The ship control processors are obsolete and contain electronic components that are no longer supported by industry.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Modification Number / Title: 3 / PB007 SSN21 CL SC PROCESSING UNIT

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> PB007 SSN21 CL SC PROCESSING UNIT												
B Kits												
Recurring												
1.1.1) SSN 21 CL SHIP CONTROL PROCESSING UNIT - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.903	- / -	- / -	- / -	- / -	1 / 0.903
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.903	- / -	- / -	- / -	- / -	- / 0.903
<i>Subtotal: PB007 SSN21 CL SC PROCESSING UNIT</i>	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.903	- / -	- / -	- / -	- / -	1 / 0.903
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.903	- / -	- / -	- / -	- / -	- / 0.903
Support (All Modification Items)												
2.1) DSA	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.011	- / -	- / -	- / -	- / -	- / 0.011
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.011	- / -	- / -	- / -	- / -	- / 0.011
Installation												
<i>Modification Item 1 of 1:</i> PB007 SSN21 CL SC PROCESSING UNIT	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.125	- / -	- / -	- / -	- / -	- / 0.125
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.125	- / -	- / -	- / -	- / -	- / 0.125
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	1.039	-	-	-	-	1.039

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Modification Number / Title: 3 / PB007 SSN21 CL SC PROCESSING UNIT

Modification Item 1 of 1: PB007 SSN21 CL SC PROCESSING UNIT

Manufacturer Information

Manufacturer Name: NUWC Neport				Manufacturer Location: Newport, RI			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 8			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates				Jan 2018			
Delivery Dates				Sep 2018			

Installation Information

Method of Implementation: AIT:: Installation Name: SSN 21 CL SHIP CONTROL PROCESSING UNIT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.125	- / -	- / -	- / -	- / -	1 / 0.125
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.125	- / -	- / -	- / -	- / -	1 / 0.125

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0941 / Submarine Support Equipment				Modification Number / Title: 4 / PB008 SSTG GOVERNORS SEAWOLF CLASS				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1.932	-	0.736	0.273	-	0.273	-	-	-	-	-	2.941
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1.932	-	0.736	0.273	-	0.273	-	-	-	-	-	2.941
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1.932	-	0.736	0.273	-	0.273	-	-	-	-	-	2.941
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

PB008 - SHIPALT WILL REPLACE SSTG GOVERNORS IN SEAWOLF CLASS SUBMARINES. THE SSTG GOVERNORS IN THESE SUBMARINES ARE OBSOLETE AND CONTAIN ELECTRONIC COMPONENTS THAT ARE NO LONGER SUPPORTED BY INDUSTRY.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0941 / Submarine Support Equipment					Modification Number / Title: 4 / PB008 SSTG GOVERNORS SEAWOLF CLASS			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> PB008 SSTG GOVERNORS SEAWOLF CLASS													
B Kits													
Recurring													
1.1.1) SSTG GOVERNORS SEAWOLF CLASS PROCURMENT - NonOrganic	2 / 1.424	- / -	1 / 0.736	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.160	
<i>Subtotal: Recurring</i>	- / 1.424	- / -	- / 0.736	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.160	
<i>Subtotal: PB008 SSTG GOVERNORS SEAWOLF CLASS</i>	2 / 1.424	- / -	1 / 0.736	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.160	
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.424	- / -	- / 0.736	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.160	
Support (All Modification Items)													
2.1) DSA	- / 0.102	- / -	- / -	- / 0.052	- / -	- / 0.052	- / -	- / -	- / -	- / -	- / -	- / 0.154	
<i>Subtotal: Support</i>	- / 0.102	- / -	- / -	- / 0.052	- / -	- / 0.052	- / -	- / -	- / -	- / -	- / -	- / 0.154	
Installation													
<i>Modification Item 1 of 1:</i> PB008 SSTG GOVERNORS SEAWOLF CLASS	- / 0.406	- / -	- / -	- / 0.221	- / -	- / 0.221	- / -	- / -	- / -	- / -	- / -	- / 0.627	
<i>Subtotal: Installation</i>	- / 0.406	- / -	- / -	- / 0.221	- / -	- / 0.221	- / -	- / -	- / -	- / -	- / -	- / 0.627	
Total													
Total Cost (Procurement + Support + Installation)	1.932	-	0.736	0.273	-	0.273	-	-	-	-	-	2.941	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Modification Number / Title: 4 / PB008 SSTG GOVERNORS SEAWOLF CLASS

Modification Item 1 of 1: PB008 SSTG GOVERNORS SEAWOLF CLASS

Manufacturer Information

Manufacturer Name: Electric Boat-Misc	Manufacturer Location: Groton, CT
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 4

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Aug 2016					
Delivery Dates		Dec 2016					

Installation Information

Method of Implementation: [none specified]:: Installation Name: SSTG GOVERNORS SEAWOLF CLASS PROCUREMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 0.406	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / 0.406
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	1 / 0.221	- / -	1 / 0.221	- / -	- / -	- / -	- / -	- / -	1 / 0.221
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 0.406	- / -	- / -	1 / 0.221	- / -	1 / 0.221	- / -	- / -	- / -	- / -	- / -	3 / 0.627

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Out	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Modification Number / Title: 5 / PB008 MOD 25
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	2.000	1.539	0.265	-	-	3.804
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	2.000	1.539	0.265	-	-	3.804
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	2.000	1.539	0.265	-	-	3.804
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

PB008 MOD 25 - SHIPALT WILL REPLACE SSTG GOVERNORS IN MOD 25 LOS ANGELES CLASS SUBMARINES. THE SSTG GOVERNORS IN THESE SUBMARINES ARE OBSOLETE AND CONTAIN ELECTRONIC COMPONENTS THAT ARE NO LONGER SUPPORTED BY INDUSTRY.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0941 / Submarine Support Equipment					Modification Number / Title: 5 / PB008 MOD 25			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> PB008 MOD 25													
B Kits													
Recurring													
1.1.1) MOD 25 PROCUREMENT - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.000	1 / 1.021	- / -	- / -	- / -	3 / 3.021	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2.000	- / 1.021	- / -	- / -	- / -	- / 3.021	
<i>Subtotal: PB008 MOD 25</i>	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.000	1 / 1.021	- / -	- / -	- / -	3 / 3.021	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2.000	- / 1.021	- / -	- / -	- / -	- / 3.021	
Support (All Modification Items)													
2.1) DSA	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.084	- / 0.044	- / -	- / -	- / 0.128	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.084	- / 0.044	- / -	- / -	- / 0.128	
Installation													
<i>Modification Item 1 of 1:</i> PB008 MOD 25	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.434	- / 0.221	- / -	- / -	- / 0.655	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.434	- / 0.221	- / -	- / -	- / 0.655	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	2.000	1.539	0.265	-	-	3.804	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0941 / Submarine Support Equipment	Modification Number / Title: 5 / PB008 MOD 25

Modification Item 1 of 1: PB008 MOD 25

Manufacturer Information

Manufacturer Name: Electric Boat-Misc	Manufacturer Location: Groton, CT
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates				Jan 2018	Jan 2019		
Delivery Dates				Jan 2019	Jan 2020		

Installation Information

Method of Implementation: [none specified]:: Installation Name: MOD 25 PROCUREMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.434	- / -	- / -	- / -	2 / 0.434
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.221	- / -	- / -	1 / 0.221
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.434	1 / 0.221	- / -	- / -	3 / 0.655

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0942 / Virginia Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604558N, 0204281N

Line Item MDAP/MAIS Code: 516 **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,162.904	69.168	35.747	66.838	-	66.838	47.874	70.557	43.738	44.624	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,162.904	69.168	35.747	66.838	-	66.838	47.874	70.557	43.738	44.624	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,162.904	69.168	35.747	66.838	-	66.838	47.874	70.557	43.738	44.624	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	1.363	1.856	1.894	-	1.894	1.582	1.845	1.871	1.903	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2017 funding request was reduced by \$9.2 million to account for the availability of prior year execution balances.

This provides a wide range of material required to operate, test, support and maintain the viability of VIRGINIA SSN-774 Class Submarines. The "Major Shore Spares" component includes rotatable pool and insurance spares. Propulsor rotatable pool assets support planned maintenance during scheduled availabilities by decreasing equipment turn-around time/availability duration. Rotatable pool program equipment includes the high pressure air compressor, various pump/motor assemblies, radar mast, ventilation fans and Thin Line Towed Array components and other components. Insurance spares (which include a main propulsion unit, and ship service turbine generator) support unplanned equipment replacement due to casualty or emergent maintenance requirements. Insurance spares availability reduces the likelihood an operating ship will be materially impaired for an undetermined period or the construction schedule extended.

This funding line also includes upgrading the afloat acoustic system required to conduct TECHEVAL/OPEVAL satisfactorily, efficiently and with minimal risk of equipment failure. Some Test and Evaluation (T&E) Measuring Equipment upgrades to underwater acoustic ranges are necessary to support class acoustic profiles T&E. Also included in the Vertical Launch System (VLS) Peculiar Support Equipment (PSE) are primarily All-Up Round Simulators (AURS)/All-Up Round (AUR) Ballast Cans necessary to conduct TECHEVAL/OPEVAL and provide ballast for ship operation.

The wireless LAN provides a shipwide (forward of the reactor compartment) intranet (NIPRNET) that significantly enhances the quality of the work by facilitating electronic correspondence, personnel data management, collaborative services, interactive whiteboard, multi-user chat and access to these sites: FTMP/NTMPS, CHCS, prescriptions, MYPAY-DFAS, EPMAC, BUPERS, EMAIL, FTSC/LANT, SUBMEPP and NKO.

Maintenance Planning System funds will be used to help ship programs identify, plan and execute maintenance activities as well as improve efficiently at all levels (performed by ship's force as well as organizational/depot level) by creating a set of tools to provide a robust, disconnected and comprehensive training and maintenance solution delivering dynamic content. This set of tools and the associated ship-to-shore data environment will reduce O&MN funding over time. This will be fielded as part of the Non-Tactical Data Processing System (NTDPS) to VIRGINIA Class submarines.

Funding for survival equipment ensures compliance to CNO requirements for crew life support and survivability for several days. Procurement includes LiOH canisters, Submarine Escape Immersion Equipment (SEIE) suits and oxygen (O2) candles.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604558N, 0204281N
Line Item MDAP/MAIS Code: 516	Item MDAP/MAIS Code(s): N/A	
<p>Ship Control Tactical Lab Set for Redesign Configuration procures the Acceptance Test Lab to support VIRGINIA Class upgrade of new ship control hardware development and qualification. Procurement includes a full tactical set of hardware for the lab.</p> <p>Finally, the continuous ship upgrades necessary to maintain class viability of the earlier ships are included in this funding line. This is particularly important for Commercial Off-the-Shelf (COTS) Technology Refreshment and Technology Upgrades for Non-Propulsion Electronic Systems (NPES). The class level of modernization and capability rests on available resources.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0942 / Virginia Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604558N, 0204281N

Line Item MDAP/MAIS Code: 516 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Virginia Class Support Equipment			- / 671.170	- / 12.215	- / 5.490	- / 4.501	- / -	- / 4.501
P-3a	1 / H1RC6 - Major Shore Spares (Various)			- / 206.685	- / 7.387	- / -	- / 7.025	- / -	- / 7.025
P-3a	2 / HRC11 - VA Class Support Equipment (Various)			- / 24.845	- / -	- / -	- / -	- / -	- / -
P-3a	3 / HRC13 - Hotel Services (Various)			- / 196.933	- / 30.839	- / 9.100	- / 29.600	- / -	- / 29.600
P-3a	4 / HRC13 - Infrastructure Upgrades (Various)			- / 8.973	- / 4.792	- / 9.862	- / 9.453	- / -	- / 9.453
P-3a	5 / HRC13 - Non-Tactical Data Processing System (Various)			- / 20.719	- / 5.402	- / 2.600	- / 4.467	- / -	- / 4.467
P-3a	6 / HRC13 - SHIPALT SA4612K (K Alt)			- / 18.924	- / -	- / -	- / -	- / -	- / -
P-3a	7 / HRC13 - Ship Control System (SCS) Modernization Backfit (Various)			- / 14.655	- / 8.533	- / 8.695	- / 11.792	- / -	- / 11.792
P-40	Total Gross/Weapon System Cost			- / 1,162.904	- / 69.168	- / 35.747	- / 66.838	- / -	- / 66.838

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Virginia Class Support Equipment			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / H1RC6 - Major Shore Spares (Various)			- / 6.272	- / 7.403	- / 7.536	- / 7.687	Continuing	Continuing
P-3a	2 / HRC11 - VA Class Support Equipment (Various)			- / -	- / -	- / -	- / -	- / -	- / 24.845
P-3a	3 / HRC13 - Hotel Services (Various)			- / 9.100	- / 28.200	- / -	- / -	- / -	- / 303.772
P-3a	4 / HRC13 - Infrastructure Upgrades (Various)			- / 14.444	- / 16.744	- / 17.077	- / 16.606	- / 1.000	- / 98.951
P-3a	5 / HRC13 - Non-Tactical Data Processing System (Various)			- / 4.549	- / 4.631	- / 4.714	- / 4.799	- / -	- / 51.881
P-3a	6 / HRC13 - SHIPALT SA4612K (K Alt)			- / -	- / -	- / -	- / -	- / -	- / 18.924
P-3a	7 / HRC13 - Ship Control System (SCS) Modernization Backfit (Various)			- / 3.746	- / -	- / -	- / -	- / -	- / 47.421
P-40	Total Gross/Weapon System Cost			- / 47.874	- / 70.557	- / 43.738	- / 44.624	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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0942 / Virginia Class Support Equipment **Aggregated Items Title:** Virginia Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) All Prior Years																				
1.1) All Prior Years (APY)	A		-	-	567.801	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 1) All Prior Years			-	-	567.801	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2) H1RC2 TEST & EVALUATION EQUIPMENT																				
2.1) Test & Evaluation Measuring Equipment	A		-	-	24.122	-	-	1.938	-	-	1.975	-	-	2.011	-	-	-	-	-	2.011
Subtotal: 2) H1RC2 TEST & EVALUATION EQUIPMENT			-	-	24.122	-	-	1.938	-	-	1.975	-	-	2.011	-	-	-	-	-	2.011
3) H1RC03 VLS/VPT Peculiar Support Equipment																				
3.1) VLS/VPT Peculiar Support Equipment	A		-	-	-	-	-	3.100	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) H1RC03 VLS/VPT Peculiar Support Equipment			-	-	0.000	-	-	3.100	-	-	-	-	-	-	-	-	-	-	-	-
4) H1RC13 TECH INSERTION TECH REFRESH & UPGRADES																				
4.1) HM&E Tech Refresh	A		-	-	5.570	-	-	1.780	-	-	0.500	-	-	-	-	-	-	-	-	-
4.2) NPES Tech Refresh	A		-	-	6.000	-	-	1.940	-	-	0.500	-	-	-	-	-	-	-	-	-
4.3) Shipboard Mobile Computing NTDPS (ULAN + SW Enclave + PDOCS + Upgrades)	A		-	-	8.576	-	-	3.378	-	-	2.446	-	-	2.490	-	-	-	-	-	2.490
4.4) System Level Activities PSA/Post PSA	A		-	-	7.076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.5) HM&E and CFE NPES Modernization	A		-	-	31.985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6) Misc. Upgrades, Tech Refresh	A		-	-	18.533	-	-	0.079	-	-	0.069	-	-	-	-	-	-	-	-	-
Subtotal: 4) H1RC13 TECH INSERTION TECH REFRESH & UPGRADES			-	-	77.740	-	-	7.177	-	-	3.515	-	-	2.490	-	-	-	-	-	2.490
5) HRC14 SURVIVAL EQUIPMENT FOR SEA RIDERS																				
5.1) Survival Equipment for Sea Trial Riders	A		-	-	1.507	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) HRC14 SURVIVAL EQUIPMENT FOR SEA RIDERS			-	-	1.507	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	671.170	-	-	12.215	-	-	5.490	-	-	4.501	-	-	-	-	-	4.501

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 1 / H1RC6 - Major Shore Spares
---	---	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	206.685	7.387	-	7.025	-	7.025	6.272	7.403	7.536	7.687	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	206.685	7.387	-	7.025	-	7.025	6.272	7.403	7.536	7.687	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	206.685	7.387	-	7.025	-	7.025	6.272	7.403	7.536	7.687	Continuing	Continuing
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procure equipment and materials necessary to support the VIRGINIA Class submarine program. Materials are as large as spare rotors and as small as spare anodes and fasteners. Quantity is variable and would skew any attempt to determine a unit cost. VIRGINIA Class rotatable pool rotors are replaced during each Extended Dry-docking Selected Restricted Availability (EDSRA). The rotors are removed, refurbished, and placed into a pool. There is no set installation schedule as rotors, once available, are installed on subsequent availabilities.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment					Modification Number / Title: 1 / H1RC6 - Major Shore Spares			
Models of Systems Affected: VA Class Submarine				Modification Type: Various				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> H1RC6 - Major Shore Spares													
B Kits													
Non-Recurring													
1.1.1) H1RC6 Prior Years - Organic	- / 172.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 172.620	
1.1.2) Propulsor - Rotatable Pool - Organic	3 / 20.292	1 / 7.387	- / -	1 / 7.025	- / -	1 / 7.025	1 / 6.272	1 / 7.403	1 / 7.536	1 / 7.687	Continuing	Continuing	
1.1.3) Propulsor - ILS Parts - Organic	- / 8.998	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.998	
1.1.4) Misc. Insurance Spares (planes, rudders, etc.) - Organic	- / 1.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.025	
1.1.5) Misc. Rotatable Pool (fans, pumps, motors, etc.) - Organic	- / 3.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.750	
<i>Subtotal: Non-Recurring</i>	- / 206.685	- / 7.387	- / -	- / 7.025	- / -	- / 7.025	- / 6.272	- / 7.403	- / 7.536	- / 7.687	Continuing	Continuing	
<i>Subtotal: H1RC6 - Major Shore Spares</i>	3 / 206.685	1 / 7.387	- / -	1 / 7.025	- / -	1 / 7.025	1 / 6.272	1 / 7.403	1 / 7.536	1 / 7.687	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 206.685	- / 7.387	- / -	- / 7.025	- / -	- / 7.025	- / 6.272	- / 7.403	- / 7.536	- / 7.687	Continuing	Continuing	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Total													
Total Cost (Procurement + Support + Installation)	206.685	7.387	-	7.025	-	7.025	6.272	7.403	7.536	7.687	Continuing	Continuing	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy					Date: February 2016		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9			P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment		Modification Number / Title: 1 / H1RC6 - Major Shore Spares		
Modification Item 1 of 1: H1RC6 - Major Shore Spares							
Manufacturer Information							
Manufacturer Name: Naval Foundary & Propeller Center - Spare Rotor ⁽¹⁾				Manufacturer Location: Philadelphia, PA			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 32			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Feb 2015		Feb 2017	Feb 2018	Feb 2019	Feb 2020	Feb 2021
Delivery Dates	Oct 2017		Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023
Manufacturer Name: Naval Foundary & Propeller Center-Hub Scoot Bar Set ⁽²⁾				Manufacturer Location: Philadelphia, PA			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 33			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: NRL ⁽³⁾				Manufacturer Location: Key West, FL			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 6			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: BAE Systems LP-Fasteners ⁽⁴⁾				Manufacturer Location: Louisville, KY			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 18			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: BAE Systems LP-SHIPALT HW ⁽⁵⁾				Manufacturer Location: Louisville, KY			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 17			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: BAE Systems LP-Spare Ropeguard ⁽⁶⁾				Manufacturer Location: Louisville, KY			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 18			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy						Date: February 2016	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9			P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment			Modification Number / Title: 1 / H1RC6 - Major Shore Spares	
Modification Item 1 of 1: H1RC6 - Major Shore Spares							
Manufacturer Information							
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Delivery Dates							
Manufacturer Name: BAE Systems LP-Ropeguard Trailing Edge Kit ⁽⁷⁾				Manufacturer Location: Louisville, KY			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 18			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: BAE Systems LP-Snubber Shim Kit ⁽⁸⁾				Manufacturer Location: Louisville, KY			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 18			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: NSWC Carderock/ARL ⁽⁹⁾				Manufacturer Location: Carderock, MD/State College, PA			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 8			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: Electric Boat-CO-H2 Burner ⁽¹⁰⁾				Manufacturer Location: Groton, CT			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 15			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: Electric Boat-ILPE Blower/Motor ⁽¹¹⁾				Manufacturer Location: Groton, CT			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 3			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: Electric Boat-Sanitary Pump/Motor ⁽¹²⁾				Manufacturer Location: Groton, CT			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 7			

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 1 / H1RC6 - Major Shore Spares

Modification Item 1 of 1: H1RC6 - Major Shore Spares

Manufacturer Information

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Manufacturer Name: Electric Boat-Misc ⁽¹³⁾ Manufacturer Location: Groton, CT

Administrative Leadtime (in Months): 0 Production Leadtime (in Months): 4

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Manufacturer Name: BAE Systems LP-SHIPALT Hardware ⁽¹⁴⁾ Manufacturer Location: Louisville, KY

Administrative Leadtime (in Months): 0 Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Propulsor - Rotatable Pool - Not Installed	Installation Quantity: 9
---	---------------------------------

Footnotes:

- (1) Spare Rotor
- (2) Hub Scoot Bar Set
- (3) Spare Anodes
- (4) Spare Fasteners
- (5) SHIPALT Hardware
- (6) Spare Ropeguard
- (7) Ropeguard Trailing Edge Kit
- (8) Snubber Shim Kit
- (9) Hardware & Engineering Services
- (10) CO-H2 Burner
- (11) ILPE Blower/Motor
- (12) Sanitary Pump/Motor

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 1 / H1RC6 - Major Shore Spares
<p>(13) Miscellaneous (14) SHIPALT Hardware</p>		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment				Modification Number / Title: 2 / HRC11 - VA Class Support Equipment				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	24.845	-	-	-	-	-	-	-	-	-	-	24.845
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	24.845	-	-	-	-	-	-	-	-	-	-	24.845
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	24.845	-	-	-	-	-	-	-	-	-	-	24.845
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procure materials necessary to establish In-Service Engineering Agents (ISEA) lab assets. There are no installation costs associated with this material.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment					Modification Number / Title: 2 / HRC11 - VA Class Support Equipment			
Models of Systems Affected: VA Class Submarines				Modification Type: Various				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: HRC11 - VA Class Support Equipment</i>													
B Kits													
Non-Recurring													
1.1.2) HRC11 Prior Years - Organic	- / 12.185	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.185	
1.1.3) Thin Line Towed Array Handling System Tester - Organic	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.400	
1.1.4) Main Shaft/Propulsion Change Out - Organic	- / 2.178	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.178	
1.1.8) Weapon and Launcher Test Set - Organic	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.300	
<i>Subtotal: Non-Recurring</i>	<i>- / 15.063</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 15.063</i>	
<i>Subtotal: HRC11 - VA Class Support Equipment</i>	<i>- / 15.063</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 15.063</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 15.063</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 15.063</i>	
Support (All Modification Items)													
2.1) Light Weight Wide Aperture Array Lab	- / 2.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.300	
2.3) VA Payload Tube Lab/Facility	- / 6.882	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.882	
2.4) Multiple Lab/Facility Upgrade	- / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.600	
<i>Subtotal: Support</i>	<i>- / 9.782</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 9.782</i>	
Installation													
<i>Subtotal: Installation</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
Total													
Total Cost (Procurement + Support + Installation)	24.845	-	-	-	-	-	-	-	-	-	-	24.845	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 2 / HRC11 - VA Class Support Equipment

Modification Item 1 of 1: HRC11 - VA Class Support Equipment

Manufacturer Information

Manufacturer Name: Electric Boat/NUWC Newport ⁽¹⁵⁾				Manufacturer Location: Groton, CT/Newport, RI			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 3			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Manufacturer Name: Electric Boat ⁽¹⁶⁾				Manufacturer Location: Groton, CT			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 3			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Footnotes:

- ⁽¹⁵⁾ ISEA Labs Material
- ⁽¹⁶⁾ VA Payload Tube Lab/Facility

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment				Modification Number / Title: 3 / HRC13 - Hotel Services				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	196.933	30.839	9.100	29.600	-	29.600	9.100	28.200	-	-	-	303.772
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	196.933	30.839	9.100	29.600	-	29.600	9.100	28.200	-	-	-	303.772
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	196.933	30.839	9.100	29.600	-	29.600	9.100	28.200	-	-	-	303.772

(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:

Provide procurement of materials necessary to modernize VIRGINIA Class Submarine Blocks I & II (774-783) infrastructure (i.e. power, cabling, cooling, and arrangements of the ship for the entire Government Furnished Equipment (GFE)/ Contractor Furnished Equipment (CFE) NPES configuration). This combination of Hull, Mechanical and Electrical (HM&E) alterations to VIRGINIA Class submarines is collectively referred to as the "Hotel Services" modification. This Hotel Service modification is necessary to accommodate modernization to major combat system alterations (i.e. A-RCI, AN/BYG-1, and ISIS) and are completed concurrently with those major combat system alterations. TI-02 baseline systems Hotel Services modernizations are completed during Post Shakedown Availability (PSA) for SSN777 and SSN779-783 and during EDSRA or TYCOM Operational Availability (TOA) for SSN774-SSN776 and SSN778. Block III and follow ships do not require this significant HM&E infrastructure upgrade as the baseline design for those ships accounts for the necessary power, cabling, cooling, etc. required to host upgrades to major combat systems.

Note: Actual costs associated with the HSWG installation on SSN 775 during EDSRA (FY12-13) have necessitated the Department to increase planned installation budget on current and future installations (Budgeted: FY15-776, FY17-778 and Planned FY18: 774).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment					Modification Number / Title: 3 / HRC13 - Hotel Services			
Models of Systems Affected: VA Class Submarines				Modification Type: Various				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> HRC13 - Hotel Services													
A Kits													
Non-Recurring													
1.1.1) Design - Organic	- / 34.233	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 34.233	
1.1.2) TI-02 Baseline Upgrade - NonOrganic	8 / 70.200	- / -	1 / 9.100	- / -	- / -	- / -	1 / 9.100	- / -	- / -	- / -	- / -	10 / 88.400	
<i>Subtotal: Non-Recurring</i>	- / 104.433	- / -	- / 9.100	- / -	- / -	- / -	- / 9.100	- / -	- / -	- / -	- / -	- / 122.633	
<i>Subtotal: HRC13 - Hotel Services</i>	8 / 104.433	- / -	1 / 9.100	- / -	- / -	- / -	1 / 9.100	- / -	- / -	- / -	- / -	10 / 122.633	
<i>Subtotal: Procurement, All Modification Items</i>	- / 104.433	- / -	- / 9.100	- / -	- / -	- / -	- / 9.100	- / -	- / -	- / -	- / -	- / 122.633	
Installation													
<i>Modification Item 1 of 1:</i> HRC13 - Hotel Services	- / 92.500	- / 30.839	- / -	- / 29.600	- / -	- / 29.600	- / -	- / 28.200	- / -	- / -	- / -	- / 181.139	
<i>Subtotal: Installation</i>	- / 92.500	- / 30.839	- / -	- / 29.600	- / -	- / 29.600	- / -	- / 28.200	- / -	- / -	- / -	- / 181.139	
Total													
Total Cost (Procurement + Support + Installation)	196.933	30.839	9.100	29.600	-	29.600	9.100	28.200	-	-	-	303.772	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 3 / HRC13 - Hotel Services

Modification Item 1 of 1: HRC13 - Hotel Services

Manufacturer Information

Manufacturer Name: Electric Boat-VA Platform Mod ⁽¹⁷⁾				Manufacturer Location: Groton, CT			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 9			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Oct 2014	Oct 2015					
Delivery Dates	Jul 2015	Jul 2016					

Manufacturer Name: Electric Boat-Design Organic ⁽¹⁸⁾				Manufacturer Location: Groton, CT			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 3			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Mar 2017				
Delivery Dates			Jun 2017				

Installation Information

Method of Implementation: AIT:: Installation Name: TI-02 Baseline Upgrade

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	7 / 92.500	1 / 30.839	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	8 / 123.339
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	1 / 29.600	- / -	1 / 29.600	- / -	- / -	- / -	- / -	- / -	1 / 29.600
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 28.200	- / -	- / -	- / -	1 / 28.200
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 92.500	1 / 30.839	- / -	1 / 29.600	- / -	1 / 29.600	- / -	1 / 28.200	- / -	- / -	- / -	10 / 181.139

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot					
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	7	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	6	-	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 3 / HRC13 - Hotel Services

Footnotes:

(17) VA Platform Modernization TI-02 Baseline Upgrade

(18) VA Platform Modernization - Design Organic

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 4 / HRC13 - Infrastructure Upgrades
---	---	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	8.973	4.792	9.862	9.453	-	9.453	14.444	16.744	17.077	16.606	1.000	98.951
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	8.973	4.792	9.862	9.453	-	9.453	14.444	16.744	17.077	16.606	1.000	98.951
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	8.973	4.792	9.862	9.453	-	9.453	14.444	16.744	17.077	16.606	1.000	98.951

(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:

Provide procurement of materials necessary to modernize VIRGINIA Class unique Contractor Furnished Equipment (CFE) to sustain interfaces and technology baseline with the connecting Government Furnished sub-systems contained in the Non-Propulsion Electronics System suite. These sub-systems include; Portable Ship Control System (PSCS), Total Ship Monitoring System, Circuit D, Ship Control System, Light Weight Wide Aperture Array and Interior Communication System.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment					Modification Number / Title: 4 / HRC13 - Infrastructure Upgrades			
Models of Systems Affected: VA Class Submarines				Modification Type: Various				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: HRC13 - Infrastructure Upgrades</i>													
A Kits													
Recurring													
1.1.1) Design - Organic	- / 2.963	- / 1.349	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.312	
<i>Subtotal: Recurring</i>	- / 2.963	- / 1.349	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.312	
Non-Recurring													
1.2.1) Infrastructure Updates (from TI-08 and beyond baseline) - NonOrganic	1 / 6.010	- / -	1 / 6.354	1 / 5.878	- / -	1 / 5.878	1 / 11.300	1 / 13.032	1 / 13.294	1 / 12.751	- / -	7 / 68.619	
<i>Subtotal: Non-Recurring</i>	- / 6.010	- / -	- / 6.354	- / 5.878	- / -	- / 5.878	- / 11.300	- / 13.032	- / 13.294	- / 12.751	- / -	- / 68.619	
<i>Subtotal: HRC13 - Infrastructure Upgrades</i>	1 / 8.973	- / 1.349	1 / 6.354	1 / 5.878	- / -	1 / 5.878	1 / 11.300	1 / 13.032	1 / 13.294	1 / 12.751	- / -	7 / 72.931	
<i>Subtotal: Procurement, All Modification Items</i>	- / 8.973	- / 1.349	- / 6.354	- / 5.878	- / -	- / 5.878	- / 11.300	- / 13.032	- / 13.294	- / 12.751	- / -	- / 72.931	
Installation													
<i>Modification Item 1 of 1: HRC13 - Infrastructure Upgrades</i>													
<i>Subtotal: Installation</i>	- / 0.000	- / 3.443	- / 3.508	- / 3.575	- / -	- / 3.575	- / 3.144	- / 3.712	- / 3.783	- / 3.855	- / 1.000	- / 26.020	
<i>Total</i>	- / 0.000	- / 3.443	- / 3.508	- / 3.575	- / -	- / 3.575	- / 3.144	- / 3.712	- / 3.783	- / 3.855	- / 1.000	- / 26.020	
Total Cost (Procurement + Support + Installation)													
	8.973	4.792	9.862	9.453	-	9.453	14.444	16.744	17.077	16.606	1.000	98.951	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 4 / HRC13 - Infrastructure Upgrades

Modification Item 1 of 1: HRC13 - Infrastructure Upgrades

Manufacturer Information

Manufacturer Name: Electric Boat-Infrastructure Upgrades ⁽¹⁹⁾ Manufacturer Location: Groton, CT

Administrative Leadtime (in Months): 0 Production Leadtime (in Months): 10

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Oct 2014		Oct 2016				
Delivery Dates	Aug 2015		Aug 2017				

Manufacturer Name: Electric Boat-Infrastrucutre Upgrades Design ⁽²⁰⁾ Manufacturer Location: Groton, CT

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

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jan 2015	Jan 2016	Jan 2017				
Delivery Dates	Mar 2015	Mar 2016	Mar 2017				

Installation Information

Method of Implementation: AIT:: Installation Name: Infrastructure Updates (from TI-08 and beyond baseline)

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 3.443	1 / 3.508	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / 6.951
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	1 / 3.575	- / -	1 / 3.575	- / -	- / -	- / -	- / -	- / -	1 / 3.575
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.144	- / -	- / -	- / -	- / -	1 / 3.144
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.712	- / -	- / -	- / -	1 / 3.712
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.783	- / -	- / -	1 / 3.783
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.855	- / -	1 / 3.855
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.000	1 / 1.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	1 / 3.443	1 / 3.508	1 / 3.575	- / -	1 / 3.575	1 / 3.144	1 / 3.712	1 / 3.783	1 / 3.855	1 / 1.000	8 / 26.020

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	8
Out	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	1	8			

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 4 / HRC13 - Infrastructure Upgrades

Footnotes:

(19) Infrastructure Upgrades from TI-08 and beyond baseline

(20) Infrastructure Upgrades Design

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment				Modification Number / Title: 5 / HRC13 - Non-Tactical Data Processing System				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	20.719	5.402	2.600	4.467	-	4.467	4.549	4.631	4.714	4.799	-	51.881
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	20.719	5.402	2.600	4.467	-	4.467	4.549	4.631	4.714	4.799	-	51.881
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	20.719	5.402	2.600	4.467	-	4.467	4.549	4.631	4.714	4.799	-	51.881
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provide software and hardware updates, software licenses and technical and logistics support to the Non-Tactical Data Processing System (NTDPS).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 5 / HRC13 - Non-Tactical Data Processing System

Models of Systems Affected: VA Class Submarine	Modification Type: Various	Related RDT&E PEs:
---	-----------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> HRC13 - Non-Tactical Data Processing System												
B Kits												
Non-Recurring												
1.1.1) NTDPs Software - Organic	- / 20.719	- / 5.402	- / 2.600	- / 4.467	- / -	- / 4.467	- / 4.549	- / 4.631	- / 4.714	- / 4.799	- / -	- / 51.881
<i>Subtotal: Non-Recurring</i>	- / 20.719	- / 5.402	- / 2.600	- / 4.467	- / -	- / 4.467	- / 4.549	- / 4.631	- / 4.714	- / 4.799	- / -	- / 51.881
<i>Subtotal: HRC13 - Non-Tactical Data Processing System</i>	- / 20.719	- / 5.402	- / 2.600	- / 4.467	- / -	- / 4.467	- / 4.549	- / 4.631	- / 4.714	- / 4.799	- / -	- / 51.881
<i>Subtotal: Procurement, All Modification Items</i>	- / 20.719	- / 5.402	- / 2.600	- / 4.467	- / -	- / 4.467	- / 4.549	- / 4.631	- / 4.714	- / 4.799	- / -	- / 51.881
Installation												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	20.719	5.402	2.600	4.467	-	4.467	4.549	4.631	4.714	4.799	-	51.881

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 5 / HRC13 - Non-Tactical Data Processing System

Modification Item 1 of 1: HRC13 - Non-Tactical Data Processing System

Manufacturer Information

Manufacturer Name: Progeny Systems	Manufacturer Location: Manassas, VA
------------------------------------	-------------------------------------

Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 10
--	-------------------------------------

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2015	Mar 2016	Mar 2017	Mar 2018	Mar 2019	Mar 2020	Mar 2021
Delivery Dates	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021

Manufacturer Name: Progeny Systems	Manufacturer Location: Manassas , VA
------------------------------------	--------------------------------------

Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 3
--	------------------------------------

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

--	--	--	--	--	--	--	--

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 6 / HRC13 - SHIPALT SA4612K
---	---	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	18.924	-	-	-	-	-	-	-	-	-	-	18.924
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	18.924	-	-	-	-	-	-	-	-	-	-	18.924
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	18.924	-	-	-	-	-	-	-	-	-	-	18.924

(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:

HM&E and CFE NPES Modernization develops alteration design documentation, alteration material procurement and kitting, alteration planning and execution for various in-service VA Class submarines. It does not include Hotel Services Working Group (HSWG) and Participating Acquisition Resource Manager (PARM) sponsored alterations. Alteration SA4612K removes the damping tile restraining layer from all Main Ballast Tanks (MBTs) and external free flood areas to prevent blockage of the MBT grates.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment					Modification Number / Title: 6 / HRC13 - SHIPALT SA4612K			
Models of Systems Affected: VA Class Submarine				Modification Type: K Alt				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: HRC13 - SHIPALT SA4612K</i>													
B Kits													
Non-Recurring													
1.1.1) SHIPALT SA4612K - NonOrganic	2 / 0.133	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.133	
<i>Subtotal: Non-Recurring</i>	- / 0.133	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.133	
<i>Subtotal: HRC13 - SHIPALT SA4612K</i>	2 / 0.133	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.133	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.133	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.133	
Installation													
<i>Modification Item 1 of 1: HRC13 - SHIPALT SA4612K</i>	- / 18.791	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.791	
<i>Subtotal: Installation</i>	- / 18.791	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.791	
Total													
Total Cost (Procurement + Support + Installation)	18.924	-	-	-	-	-	-	-	-	-	-	18.924	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 6 / HRC13 - SHIPALT SA4612K

Modification Item 1 of 1: HRC13 - SHIPALT SA4612K

Manufacturer Information

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

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: SHIPALT SA4612K

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 18.791	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / 18.791
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 18.791	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 18.791

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment				Modification Number / Title: 7 / HRC13 - Ship Control System (SCS) Modernization Backfit				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	14.655	8.533	8.695	11.792	-	11.792	3.746	-	-	-	-	47.421
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	14.655	8.533	8.695	11.792	-	11.792	3.746	-	-	-	-	47.421
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	14.655	8.533	8.695	11.792	-	11.792	3.746	-	-	-	-	47.421
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procure and install obsolescence redesign for Ship Control System (SCS) on Block I and II. The material procurement in FY14-17 includes long lead items for four shipsets for backfit (SSN776-SSN779).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment					Modification Number / Title: 7 / HRC13 - Ship Control System (SCS) Modernization Backfit			
Models of Systems Affected: VA Class Submarines				Modification Type: Various				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: HRC13 - Ship Control System (SCS) Modernization Backfit</i>													
A Kits													
Non-Recurring													
1.1.1) Modification Non-Recurring - Organic													
	- / 5.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.300	
<i>Subtotal: Non-Recurring</i>													
	- / 5.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.300	
B Kits													
Non-Recurring													
2.1.1) Material and Install - NonOrganic													
	2 / 8.600	1 / 4.993	1 / 5.088	1 / 5.187	- / -	1 / 5.187	- / -	- / -	- / -	- / -	- / -	5 / 23.868	
<i>Subtotal: Non-Recurring</i>													
	- / 8.600	- / 4.993	- / 5.088	- / 5.187	- / -	- / 5.187	- / -	- / -	- / -	- / -	- / -	- / 23.868	
<i>Subtotal: HRC13 - Ship Control System (SCS) Modernization Backfit</i>													
	2 / 13.900	1 / 4.993	1 / 5.088	1 / 5.187	- / -	1 / 5.187	- / -	- / -	- / -	- / -	- / -	5 / 29.168	
<i>Subtotal: Procurement, All Modification Items</i>													
	- / 13.900	- / 4.993	- / 5.088	- / 5.187	- / -	- / 5.187	- / -	- / -	- / -	- / -	- / -	- / 29.168	
Installation													
<i>Modification Item 1 of 1: HRC13 - Ship Control System (SCS) Modernization Backfit</i>													
	- / 0.755	- / 3.540	- / 3.607	- / 6.605	- / -	- / 6.605	- / 3.746	- / -	- / -	- / -	- / -	- / 18.253	
<i>Subtotal: Installation</i>													
	- / 0.755	- / 3.540	- / 3.607	- / 6.605	- / -	- / 6.605	- / 3.746	- / -	- / -	- / -	- / -	- / 18.253	
Total													
Total Cost (Procurement + Support + Installation)	14.655	8.533	8.695	11.792	-	11.792	3.746	-	-	-	-	47.421	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 7 / HRC13 - Ship Control System (SCS) Modernization Backfit

Modification Item 1 of 1: HRC13 - Ship Control System (SCS) Modernization Backfit

Manufacturer Information

Manufacturer Name: Electric Boat-Procurement ⁽²¹⁾				Manufacturer Location: Groton, CT			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 13			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Nov 2014	Nov 2015	Nov 2016	Nov 2017	Nov 2018	Nov 2019	Nov 2020
Delivery Dates	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021

Manufacturer Name: Electric Boat-Install ⁽²²⁾				Manufacturer Location: Groton, CT			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 3			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates					Jan 2019		
Delivery Dates					Apr 2019		

Installation Information

Method of Implementation: AIT:: Installation Name: Material and Install

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	0 / 0.755	2 / 3.540	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / 4.295
FY 2015	- / -	- / -	1 / 3.607	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.607
FY 2016	- / -	- / -	- / -	1 / 6.605	- / -	1 / 6.605	- / -	- / -	- / -	- / -	- / -	1 / 6.605
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.746	- / -	- / -	- / -	- / -	1 / 3.746
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.755	2 / 3.540	1 / 3.607	1 / 6.605	- / -	1 / 6.605	1 / 3.746	- / -	- / -	- / -	- / -	5 / 18.253

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0942 / Virginia Class Support Equipment	Modification Number / Title: 7 / HRC13 - Ship Control System (SCS) Modernization Backfit

Modification Item 1 of 1: HRC13 - Ship Control System (SCS) Modernization Backfit

Installation Information

Method of Implementation: AIT:: Installation Name: Material and Install

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	
Out	-	-	-	2	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	5		

Footnotes:

(21) SCS Backfit Procurement

(22) SCS Backfit Install

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	53.469	25.742	39.349	54.823	-	54.823	74.003	63.189	64.349	65.629	-	440.553
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	53.469	25.742	39.349	54.823	-	54.823	74.003	63.189	64.349	65.629	-	440.553
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	53.469	25.742	39.349	54.823	-	54.823	74.003	63.189	64.349	65.629	-	440.553

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	1.749	2.693	1.823	-	1.823	1.968	1.853	1.782	-	-	11.868
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2017 funding request was reduced by \$14.800 million to account for the availability of prior years execution.

This budget provides for the procurement of long-lead major end items required for Littoral Combat Ship (LCS) repairs for both variants while production lines are still active. The spares procurement mitigates major long-lead replacement times due to unplanned system failures and increases availability of vital Fleet assets by reducing repair part procurement and delivery times.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0944 / LCS Class Support Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	LCS Class Support Equipment	P-5a, P-21		- / 53.469	- / 25.742	- / 39.349	- / 54.823	- / -	- / 54.823
P-40	Total Gross/Weapon System Cost			- / 53.469	- / 25.742	- / 39.349	- / 54.823	- / -	- / 54.823

*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:

LN001 - LCS Battle Spares
This line procures shore-based battle spares to ensure their availability in the event of a failure or major casualty to key systems. Systems that require shore-based spares include gas turbines, diesel engines and generators, propulsion water jets and water jet tunnels, reduction gears, auxiliary propulsion unit (APU), and machinery plant control & monitoring system (MPCMS). Spares are determined using the LCS Reliability, Maintainability, and Availability (RMA) Plan, NAVSEA RMA guidance, critical application of equipment, and vendor data.

LN002 - LCS Water Jet Spares
LCS are propelled by water jets. In the event of a casualty, the water jets are removed and sent to a depot to be repaired. This line procures water jet units including the impeller, a major water jet component. These items will be designated 2S cog material and support a rotatable pool for life cycle sustainment. There are two LCS designs, the FREEDOM variant and the INDEPENDENCE variant, each using four (4) water jets. The FREEDOM variant uses Rolls-Royce water jets and the INDEPENDENCE variant uses Wartsila Lips water jets. Note: The water jet assemblies are mounted externally on the ships transom.

LN003 - Engineering Services
This funding provides engineering and technical support for LCS Class Support Equipment, develops Technical Data Packages (TDPs) and creates associated depot level repair parts lists/installation requirements. Funding is also provided for Non-Recurring Engineering (NRE) and DSA modernization efforts beginning in FY17 tied to Ship availabilities in FY17 and out.

LN004 - Habitability Modification
Habitability Modifications to increase the permanent berths to 98 on the FREEDOM and INDEPENDENCE variants for the LCS 5-8. The change addresses the following: berthing spaces, refrigeration (chill and freeze), dry provision stores, potable water, solid waste storage, HVAC duct and venting adjustments, Galley upgrades, and ship service electrical modifications. In FY18, the budget for the Habitability Modifications for LCS 9-20 was realigned to LI 1604, LCS In-Service Modernization.

LN005 - LCS Ships Class Safety Design Changes
Ship Modifications to support back-fit of Stern Ramp modifications to the Freedom Class (LCS 5 and 7) and installation of Bridge Wings on the Independence Class (LCS 6 and 8). In FY18, the budget for the LCS Ships Class Safety Design Changes for LCS 9-20 was realigned to LI 1604, LCS In-Service Modernization.

LN006 - LCS Ships Class Ancillary Equipment
Beginning in FY17 - Connective equipment and parts necessary to ensure fit and function of (procured) Class Support Equipment when installed.

LN007 - AFSB SOF MODs
This funding procures the Sea Giraffe Radar System (AN/SPS-77) to modify the Mobile Landing Platform-Afloat Forward Staging Base (MLP-AFSB) (Expeditionary Mobile Base, ESB) to support Special Operations Forces (SOF) requirements. This system would fulfill the requirement for a 3-D Air Search Radar.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment **Aggregated Items Title:** LCS Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) LN001 LCS Battle Spares																				
1.1) MAIN PROPULSION DIESEL ENGINE (INDEPENDENCE VARIANT) ^(†)	A		4,450K	1	4.450	-	-	-	-	-	-	4,703K	1	4.703	-	-	-	4,703K	1	4.703
1.2) MT-30 GAS TURBINE ENGINE (FREEDOM VARIANT) ^{(†)(†)}	A		4,903K	1	4.903	-	-	-	5,170K	1	5.170	15,323K	1	15.323	-	-	-	15,323K	1	15.323
1.3) SHIPS SERVICE DIESEL GENERATOR (INDEPENDENCE VARIANT) ^(†)	A		1,906K	2	3.812	-	-	-	3,950K	1	3.950	4,029K	1	4.029	-	-	-	4,029K	1	4.029
1.4) LAUNCH, RECOVERY, AND HANDLING SYSTEM (FREEDOM VARIANT) ^(†)	A		3,598K	1	3.598	-	-	-	-	-	-	3,802K	1	3.802	-	-	-	3,802K	1	3.802
1.5) INTEGRATED BRIDGE SYSTEM ^(†)	A		0.00	1	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.7) MT-30 GAS TURBINE ENGINE ANCILLARY EQUIPMENT (FRE) ^(†)	A		-	-	-	8,354K	1	8.354	-	-	-	-	-	-	-	-	-	-	-	-
1.8) MAIN PROP. CONTRL & MONITORING SYS (MPCMS)/ ENGINEERING CONTRL SYS (ECS) ^(†)	A		-	-	-	-	-	-	750,000.00	1	0.750	-	-	-	-	-	-	-	-	-
1.9) TWIN-BOOM EXPANDABLE CRANE (INDEPENDENCE VARIANT) ^(†)	A		-	-	-	3,700K	1	3.700	-	-	-	-	-	-	-	-	-	-	-	-
1.10) TRS-3D RADAR (FREEDOM VARIANT) ^(†)	A		1,526K	1	1.526	640,000.00	1	0.640	1,400K	1	1.400	-	-	-	-	-	-	-	-	-
1.11) SEA GIRAFFE 3D RADAR (IND) ^(†)	A		2,313K	1	2.313	-	-	-	1,400K	1	1.400	-	-	-	-	-	-	-	-	-
1.12) MULT. AIRCRAFT NOSE & TAILGEAR INTEGRATED SYS	A		-	-	-	-	-	-	900,000.00	1	0.900	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment **Aggregated Items Title:** LCS Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
(INDEPENDENCE VAR) ^(†)																				
1.13) REDUCTION GEAR (FREEDOM VARIANT) ^(†)	A		13,614K	1	13.614	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.14) REDUCTION GEAR (INDEPENDENCE VARIANT) ^(†)	A		-	-	-	6,449K	1	6.449	-	-	-	-	-	-	-	-	-	-	-	-
1.15) ELECTRONIC SUPPORT MEASURES ^(†)	A		-	-	-	-	-	-	-	-	1,450K	1	1.450	-	-	-	1,450K	1	1.450	-
1.16) AUXILLARY POWER UNIT ^(†)	A		809,000.00	1	0.809	-	-	-	-	-	1,190K	2	2.379	-	-	-	1,190K	2	2.379	-
1.17) MAIN PROPULSION DIESEL ENGINE (FREEDOM VARIANT) ^(†)	A		5,695K	1	5.695	5,599K	1	5.599	-	-	-	-	-	-	-	-	-	-	-	-
1.18) SHIPS SERVICE DIESEL GENERATOR (FREEDOM VARIANT) ^(†)	A		803,000.00	1	0.803	799,000.00	1	0.799	815,000.00	1	0.815	831,000.00	1	0.831	-	-	831,000.00	1	0.831	-
Subtotal: 1) LN001 LCS Battle Spares			-	-	41.523	-	-	25.541	-	-	14.385	-	-	32.517	-	-	-	-	-	32.517
2) LN002 LCS Water jet Spares																				
2.1) WATERJET ASSEMBLY (FREEDOM VARIANT) ^(†)	A		1,582K	4	6.328	-	-	-	-	-	2,424K	5	12.118	-	-	-	2,424K	5	12.118	-
2.2) WATERJET IMPELLER (INDEPENDENCE VARIANT) ^(†)	A		726,142.86	7	5.083	-	-	-	-	-	790,000.00	2	1.580	-	-	-	790,000.00	2	1.580	-
Subtotal: 2) LN002 LCS Water jet Spares			-	-	11.411	-	-	-	-	-	-	-	13.698	-	-	-	-	-	-	13.698
3) LN003 Engineering Services (TDPs & installation planning)																				
3.1) Engineering Services (TDPs & installation planning)	A		-	-	-	-	-	0.201	-	-	0.204	-	-	0.208	-	-	-	-	-	0.208
3.2) Modernization Design/Eng Changes for LCS 4	A		-	-	-	-	-	-	-	-	3.600	-	-	8.095	-	-	-	-	-	8.095

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment **Aggregated Items Title:** LCS Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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: 3) LN003 Engineering Services (TDPs & installation planning)			-	-	0.000	-	-	0.201	-	-	3.804	-	-	8.303	-	-	-	-	-	8.303
4) LN004 Habitability Modification																				
4.1) HABITABILITY MOD (FRE VARIANT) ^(†)	A		-	-	-	-	-	-	4,525K	1	4.525	-	-	-	-	-	-	-	-	-
4.2) HABITABILITY MOD (IND VARIANT) ^(†)	A		-	-	-	-	-	-	4,525K	1	4.525	-	-	-	-	-	-	-	-	-
Subtotal: 4) LN004 Habitability Modification			-	-	0.000	-	-	-	-	-	9.050	-	-	-	-	-	-	-	-	-
5) LN005 LCS Ship Class Safety Design Changes																				
5.1) Stern Ramp (FRE Variant) ^(†)	A		-	-	-	-	-	-	600,000.00	2	1.200	-	-	-	-	-	-	-	-	-
5.2) Bridge Wings (IND Variant) ^(†)	A		-	-	-	-	-	-	2,600K	2	5.200	-	-	-	-	-	-	-	-	-
Subtotal: 5) LN005 LCS Ship Class Safety Design Changes			-	-	0.000	-	-	-	-	-	6.400	-	-	-	-	-	-	-	-	-
6) LN006 Ancillary Equipment																				
6.1) Ancillary Equipment	A		-	-	0.535	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) LN006 Ancillary Equipment			-	-	0.535	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7) LN007 Afloat Forward Staging Base SOF Mods																				
7.1) AFSB SOF Mods MLP-AFSB 3 Rev	A		-	-	-	-	-	-	-	-	5.710	-	-	0.305	-	-	-	-	-	-
Subtotal: 7) LN007 Afloat Forward Staging Base SOF Mods			-	-	0.000	-	-	-	-	-	5.710	-	-	0.305	-	-	-	-	-	-
Total			-	-	53.469	-	-	25.742	-	-	39.349	-	-	54.823	-	-	-	-	-	-

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 FY17 and FY18 procurements encompass all stages of the MT-30 Gas Turbine Engine. In prior years, the Program Office has procured separate stages (all usable-end-items) of the MT-30.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9			P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment					Aggregated Items: LCS Class Support Equipment				
Item Number / Title [DODIC]	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) LN001 LCS Battle Spares												
1.1) MAIN PROPULSION DIESEL ENGINE (INDEPENDENCE VARIANT) ^(†)		2014	MTU / GERMANY	C / FFP	NAVSUP/WSS	Mar 2015	May 2016	1	4,450K	Y		Jul 2014
1.1) MAIN PROPULSION DIESEL ENGINE (INDEPENDENCE VARIANT) ^(†)		2017	MTU / GERMANY	C / FFP	NAVSUP/WSS	Jan 2017	Jan 2018	1	4,703K	Y		Feb 2016
1.2) MT-30 GAS TURBINE ENGINE (FREEDOM VARIANT) ^{(1)(†)}		2013	ROLLS ROYCE / WALEPOLE, MA	C / FFP	NAVSUP/WSS	May 2014	May 2016	1	4,903K	Y		Feb 2014
1.2) MT-30 GAS TURBINE ENGINE (FREEDOM VARIANT) ^{(1)(†)}		2016	ROLLS ROYCE / WALEPOLE, MA	C / FFP	NAVSUP/WSS	May 2016	May 2018	1	5,170K	Y		Nov 2015
1.2) MT-30 GAS TURBINE ENGINE (FREEDOM VARIANT) ^{(1)(†)}		2017	ROLLS ROYCE / WALEPOLE, MA	C / FFP	NAVSUP/WSS	May 2017	May 2019	1	15,323K	Y		Nov 2016
1.3) SHIPS SERVICE DIESEL GENERATOR (INDEPENDENCE VARIANT) ^(†)		2014	MTU / GERMANY	C / FFP	NAVSUP/WSS	Feb 2015	May 2016	1	3,812K	Y		Jul 2014
1.3) SHIPS SERVICE DIESEL GENERATOR (INDEPENDENCE VARIANT) ^(†)		2016	MTU / GERMANY	C / FFP	NAVSUP/WSS	Feb 2016	May 2017	1	3,950K	Y		Oct 2015
1.3) SHIPS SERVICE DIESEL GENERATOR (INDEPENDENCE VARIANT) ^(†)		2017	MTU / GERMANY	C / FFP	NAVSUP/WSS	Jan 2017	Jan 2018	1	4,029K	Y		Feb 2016
1.4) LAUNCH, RECOVERY, AND HANDLING SYSTEM (FREEDOM VARIANT) ^(†)		2014	Oldenburg Group Inc. / Kingsford, MI	C / FFP	NAVSUP/WSS	Mar 2015	Sep 2016	1	3,598K	Y		Jul 2014
1.4) LAUNCH, RECOVERY, AND HANDLING SYSTEM (FREEDOM VARIANT) ^(†)		2017	Oldenburg Group Inc. / Kingsford, MI	C / FFP	NAVSUP/WSS	Jan 2017	Jul 2018	1	3,802K	Y		Feb 2016
1.5) INTEGRATED BRIDGE SYSTEM ^(†)		2014	SPERRY / Charlottesville, VA	C / FFP	NAVSUP/WSS	Apr 2015	Apr 2016	1	-	Y		Nov 2013
1.7) MT-30 GAS TURBINE ENGINE ANCILLARY EQUIPMENT (FRE)		2015	ROLLS ROYCE / WALEPOLE, MA	C / TBD	NAVSUP/WSS	Jun 2016	Jun 2018	1	8,354K	Y		Jan 2016

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9			P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment					Aggregated Items: LCS Class Support Equipment				
Item Number / Title [DODIC]	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
1.8) MAIN PROP. CONTRL & MONITORING SYS (MPCMS)/ ENGINEERING CONTRL SYS (ECS)		2016	TBD / TBD	C / CPFF	NAVSUP/WSS	Sep 2016	Mar 2018	1	750,000.00	Y		Nov 2015
1.9) TWIN-BOOM EXPANDABLE CRANE (INDEPENDENCE VARIANT)		2015	Oldenburg Group Inc. / Kingsford, MI	C / FFP	NAVSUP/WSS	Dec 2015	Jan 2017	1	3,700K	Y		Apr 2015
1.10) TRS-3D RADAR (FREEDOM VARIANT)		2014	EADS North America / Herdon, VA	C / FFP	NAVSEA	Jun 2015	Dec 2016	1	1,526K	Y		Dec 2014
1.10) TRS-3D RADAR (FREEDOM VARIANT)		2015	EADS North America / Herdon, VA	C / FFP	NAVSEA	May 2015	Nov 2016	1	640,000.00	Y		Nov 2014
1.10) TRS-3D RADAR (FREEDOM VARIANT)		2016	EADS North America / Herdon, VA	C / FFP	NAVSEA	Jan 2016	Jul 2017	1	1,400K	Y		May 2015
1.11) SEA GIRAFFE 3D RADAR (IND) ^(†)		2014	Saab Sensis Corporation / Reston, VA	PO	NSWC, PHD	Aug 2015	Nov 2016	1	2,313K	Y		Jul 2015
1.11) SEA GIRAFFE 3D RADAR (IND) ^(†)		2016	Saab Sensis Corporation / Reston, VA	PO	NSWC, PHD	Apr 2016	Jul 2017	1	1,400K	Y		Sep 2015
1.12) MULT. AIRCRAFT NOSE & TAILGEAR INTEGRATED SYS (INDEPENDENCE VAR)		2016	Curtis-Wright Flow Control / United Kingdom	C / TBD	NAVSUP/WSS	Sep 2016	Mar 2018	1	900,000.00	Y		Nov 2015
1.13) REDUCTION GEAR (FREEDOM VARIANT) ^(†)		2014	Lockheed Martin / MD	C / FFP	NAVSEA	Jul 2015	Oct 2016	1	13,614K	Y		Jan 2015
1.14) REDUCTION GEAR (INDEPENDENCE VARIANT) ^(†)		2015	Austal / AL	C / FFP	NAVSUP/WSS	Sep 2015	Feb 2017	1	6,449K	Y		Apr 2015
1.15) ELECTRONIC SUPPORT MEASURES ^(†)		2017	TBD / TBD	C / TBD	** NO PCO **	May 2017	Nov 2018	1	1,450K	Y		
1.16) AUXILLARY POWER UNIT		2014	Thrustmaster / TX	C / FFP	NAVSUP/WSS	Sep 2014	Mar 2016	1	809,000.00	Y		Jul 2014
1.16) AUXILLARY POWER UNIT		2017	Fairbanks Morse / Beloit WI	C / FFP	NAVSUP/WSS	Jan 2017	Jul 2018	2	1,190K	Y		Jun 2016
1.17) MAIN PROPULSION DIESEL ENGINE (FREEDOM VARIANT) ^(†)		2014	Fairbanks Morse / Beloit WI	C / FFP	NAVSUP/WSS	Nov 2014	May 2016	1	5,695K	Y		Nov 2013
1.17) MAIN PROPULSION DIESEL ENGINE (FREEDOM VARIANT) ^(†)		2015	Fairbanks Morse / Beloit WI	C / FFP	NAVSUP/WSS	Mar 2015	Sep 2016	1	5,599K	Y		Nov 2014
1.18) SHIPS SERVICE DIESEL GENERATOR (FREEDOM VARIANT) ^(†)		2014	Fincantieri / Washington, DC	C / FFP	NAVSUP/WSS	Jan 2015	Jan 2016	1	803,000.00	Y		Oct 2014
1.18) SHIPS SERVICE DIESEL GENERATOR (FREEDOM VARIANT) ^(†)		2015	Fincantieri / Washington, DC	C / FFP	NAVSUP/WSS	Mar 2015	Mar 2016	1	799,000.00	Y		Oct 2014

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment	Aggregated Items: LCS Class Support Equipment
---	--	---

Item Number / Title [DODIC]	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
1.18) SHIPS SERVICE DIESEL GENERATOR (FREEDOM VARIANT) ^(†)		2016	Fincantieri / Washington, DC	C / FFP	NAVSUP/WSS	Feb 2016	Feb 2017	1	815,000.00	Y		Aug 2015
1.18) SHIPS SERVICE DIESEL GENERATOR (FREEDOM VARIANT) ^(†)		2017	Fincantieri / Washington, DC	C / CPFF	NAVSUP/WSS	Jan 2017	Jan 2018	1	831,000.00	Y		Feb 2016
2) LN002 LCS Water jet Spares												
2.1) WATERJET ASSEMBLY (FREEDOM VARIANT) ^(†)		2013	Rolls Royce / MS	C / FFP	NAVSUP/WSS	May 2014	May 2016	1	1,268K	Y		Feb 2014
2.1) WATERJET ASSEMBLY (FREEDOM VARIANT) ^(†)		2014	Rolls Royce / MS	C / FFP	NAVSUP/WSS	Nov 2014	Nov 2016	3	1,687K	Y		Jul 2014
2.1) WATERJET ASSEMBLY (FREEDOM VARIANT) ^(†)		2017	Rolls Royce / MS	C / CPFF	NAVSUP/WSS	Oct 2016	Oct 2018	5	2,424K	Y		Mar 2016
2.2) WATERJET IMPELLER (INDEPENDENCE VARIANT) ^(†)		2013	Wartsilla / VA	C / FFP	NAVSUP/WSS	May 2014	May 2016	3	620,000.00	Y		Feb 2014
2.2) WATERJET IMPELLER (INDEPENDENCE VARIANT) ^(†)		2014	Wartsilla / VA	C / FFP	NAVSUP/WSS	Sep 2014	Sep 2015	4	805,750.00	Y		Aug 2014
2.2) WATERJET IMPELLER (INDEPENDENCE VARIANT) ^(†)		2017	Wartsilla / VA	C / CPFF	NAVSUP/WSS	Oct 2016	Oct 2017	2	790,000.00	Y		Mar 2016
4) LN004 Habitability Modification												
4.1) HABITABILITY MOD (FRE VARIANT) ^(†)		2016	FRE Variant (LM) / Marinette, WI	C / CPAF	NAVSEA	May 2016	Nov 2016	1	4,525K	Y		Jan 2016
4.2) HABITABILITY MOD (IND VARIANT) ^(†)		2016	IND Variant (Austal) / Mobile, AL	C / CPAF	NAVSEA	Mar 2016	Sep 2016	1	4,525K	Y		Dec 2015
5) LN005 LCS Ship Class Safety Design Changes												
5.1) Stern Ramp (FRE Variant)		2016	FRE Variant (LM) / Marinette, WI	C / CPAF	NAVSEA	May 2016	Nov 2016	2	600,000.00	N		Jan 2016
5.2) Bridge Wings (IND Variant)		2016	IND Variant (Austal) / Mobile, AL	C / CPAF	NAVSEA	Mar 2016	Sep 2016	2	2,600K	N		Dec 2015

^(†) indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy																											Date: February 2016																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9													P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment											Aggregated Items: LCS Class Support Equipment																			
Items (Units in Each)						Fiscal Year 2014														Fiscal Year 2015														BALANCE									
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014														Calendar Year 2015																						
							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) LN001 LCS Battle Spares																																											
1.1) MAIN PROPULSION DIESEL ENGINE (INDEPENDENCE VARIANT)																																											
4		2014	NAVY	1	-	1																							A -	-	-	-	-	-	-	-	-	1					
4		2017	NAVY	1	-	1																																		1			
1.2) MT-30 GAS TURBINE ENGINE (FREEDOM VARIANT) (1)																																											
5		2013	NAVY	1	-	1																								A -	-	-	-	-	-	-	-	-	-	-	1		
5		2016	NAVY	1	-	1																																			1		
5		2017	NAVY	1	-	1																																			1		
1.3) SHIPS SERVICE DIESEL GENERATOR (INDEPENDENCE VARIANT)																																											
Prior Years Deliveries: 1																																											
6		2014	NAVY	1	-	1																								A -	-	-	-	-	-	-	-	-	-	-	1		
6		2016	NAVY	1	-	1																																			1		
6		2017	NAVY	1	-	1																																			1		
1.4) LAUNCH, RECOVERY, AND HANDLING SYSTEM (FREEDOM VARIANT)																																											
7		2014	NAVY	1	-	1																								A -	-	-	-	-	-	-	-	-	-	-	1		
7		2017	NAVY	1	-	1																																			1		
1.5) INTEGRATED BRIDGE SYSTEM																																											
8		2014	NAVY	1	-	1																								A -	-	-	-	-	-	-	-	-	-	-	1		
1.11) SEA GIRAFFE 3D RADAR (IND)																																											
9		2014	NAVY	1	-	1																																			A -	-	1
9		2016	NAVY	1	-	1																																				1	
1.13) REDUCTION GEAR (FREEDOM VARIANT)																																											
10		2014	NAVY	1	-	1																																			A -	-	1
1.14) REDUCTION GEAR (INDEPENDENCE VARIANT)																																											
11		2015	NAVY	1	-	1																																				A -	1
1.15) ELECTRONIC SUPPORT MEASURES																																											
12		2017	NAVY	1	-	1																																				1	
1.17) MAIN PROPULSION DIESEL ENGINE (FREEDOM VARIANT)																																											
13		2014	NAVY	1	-	1																								A -	-	-	-	-	-	-	-	-	-	-	-	1	
13		2015	NAVY	1	-	1																																			A -	-	1
1.18) SHIPS SERVICE DIESEL GENERATOR (FREEDOM VARIANT)																																											
14		2014	NAVY	1	-	1																								A -	-	-	-	-	-	-	-	-	-	-	-	1	
14		2015	NAVY	1	-	1																																			A -	-	1
							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 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment	Aggregated Items: LCS Class Support Equipment
---	--	---

Items (Units in Each)					Fiscal Year 2014												Fiscal Year 2015												BALANCE																							
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014												Calendar Year 2015																																	
							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																					
14		2016	NAVY	1	-	1																																														
14		2017	NAVY	1	-	1																																														
2) LN002 LCS Water jet Spares																																																				
2.1) WATERJET ASSEMBLY (FREEDOM VARIANT)																																																				
15		2013	NAVY	1	-	1											A	-	-	-	-	-	-	-	-	-	-	-																								
15		2014	NAVY	3	-	3																																														
15		2017	NAVY	5	-	5																																														
2.2) WATERJET IMPELLER (INDEPENDENCE VARIANT)																																																				
16		2013	NAVY	3	-	3											A	-	-	-	-	-	-	-	-	-	-	-																								
16		2014	NAVY	4	-	4																																														
16		2017	NAVY	2	-	2																																														
4) LN004 Habitability Modification																																																				
4.1) HABITABILITY MOD (FRE VARIANT)																																																				
17		2016	NAVY	1	-	1																																														
4.2) HABITABILITY MOD (IND VARIANT)																																																				
18		2016	NAVY	1	-	1																																														
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment **Aggregated Items:** LCS Class Support Equipment

Items <i>(Units in Each)</i>					Fiscal Year 2016													Fiscal Year 2017													BALANCE				
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016													Calendar Year 2017															
							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) LN001 LCS Battle Spares																																			
1.1) MAIN PROPULSION DIESEL ENGINE (INDEPENDENCE VARIANT)																																			
4		2014	NAVY	1	-	1	-	-	-	-	-	-	-	-	1																			-	
4		2017	NAVY	1	-	1																												1	
1.2) MT-30 GAS TURBINE ENGINE (FREEDOM VARIANT) (1)																																			
5		2013	NAVY	1	-	1	-	-	-	-	-	-	-	-	1																				-
5		2016	NAVY	1	-	1																												1	
5		2017	NAVY	1	-	1																												1	
1.3) SHIPS SERVICE DIESEL GENERATOR (INDEPENDENCE VARIANT)																																			
Prior Years Deliveries: 1																																			
6		2014	NAVY	1	-	1	-	-	-	-	-	-	-	-	1																				-
6		2016	NAVY	1	-	1																												-	
6		2017	NAVY	1	-	1																												1	
1.4) LAUNCH, RECOVERY, AND HANDLING SYSTEM (FREEDOM VARIANT)																																			
7		2014	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7		2017	NAVY	1	-	1																													
1.5) INTEGRATED BRIDGE SYSTEM																																			
8		2014	NAVY	1	-	1	-	-	-	-	-	-	-	-	1																				
1.11) SEA GIRAFFE 3D RADAR (IND)																																			
9		2014	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
9		2016	NAVY	1	-	1																													
1.13) REDUCTION GEAR (FREEDOM VARIANT)																																			
10		2014	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1.14) REDUCTION GEAR (INDEPENDENCE VARIANT)																																			
11		2015	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.15) ELECTRONIC SUPPORT MEASURES																																			
12		2017	NAVY	1	-	1																													
1.17) MAIN PROPULSION DIESEL ENGINE (FREEDOM VARIANT)																																			
13		2014	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
13		2015	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.18) SHIPS SERVICE DIESEL GENERATOR (FREEDOM VARIANT)																																			
14		2014	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
14		2015	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment **Aggregated Items:** LCS Class Support Equipment

Items <i>(Units in Each)</i>				Fiscal Year 2016												Fiscal Year 2017												BALANCE									
OC	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						
	14	2016	NAVY	1	-	1																															-
	14	2017	NAVY	1	-	1															A	-															1
2) LN002 LCS Water jet Spares																																					
2.1) WATERJET ASSEMBLY (FREEDOM VARIANT)																																					
	15	2013	NAVY	1	-	1																														-	
	15	2014	NAVY	3	-	3																															-
	15	2017	NAVY	5	-	5														A	-															5	
2.2) WATERJET IMPELLER (INDEPENDENCE VARIANT)																																					
	16	2013	NAVY	3	-	3																															-
	16	2014	NAVY	4	-	4																															-
	16	2017	NAVY	2	-	2															A	-															2
4) LN004 Habitability Modification																																					
4.1) HABITABILITY MOD (FRE VARIANT)																																					
	17	2016	NAVY	1	-	1															A	-															-
4.2) HABITABILITY MOD (IND VARIANT)																																					
	18	2016	NAVY	1	-	1															A	-															-
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0944 / LCS Class Support Equipment **Aggregated Items:** LCS Class Support Equipment

Items <i>(Units in Each)</i>					Fiscal Year 2018													Fiscal Year 2019												BALANCE		
O C C O #	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) LN001 LCS Battle Spares																																
1.1) MAIN PROPULSION DIESEL ENGINE (INDEPENDENCE VARIANT)																																
4		2014	NAVY	1	1	-																						-				
4		2017	NAVY	1	-	1	-	-	-	-	1																	-				
1.2) MT-30 GAS TURBINE ENGINE (FREEDOM VARIANT) (1)																																
5		2013	NAVY	1	1	-																					-					
5		2016	NAVY	1	-	1	-	-	-	-	-	-	1															-				
5		2017	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-						
1.3) SHIPS SERVICE DIESEL GENERATOR (INDEPENDENCE VARIANT)																																
Prior Years Deliveries: 1																																
6		2014	NAVY	1	1	-																					-					
6		2016	NAVY	1	1	-																					-					
6		2017	NAVY	1	-	1	-	-	-	-	1																-					
1.4) LAUNCH, RECOVERY, AND HANDLING SYSTEM (FREEDOM VARIANT)																																
7		2014	NAVY	1	1	-																					-					
7		2017	NAVY	1	-	1	-	-	-	-	-	-	-	-	1													-				
1.5) INTEGRATED BRIDGE SYSTEM																																
8		2014	NAVY	1	1	-																					-					
1.11) SEA GIRAFFE 3D RADAR (IND)																																
9		2014	NAVY	1	1	-																					-					
9		2016	NAVY	1	1	-																					-					
1.13) REDUCTION GEAR (FREEDOM VARIANT)																																
10		2014	NAVY	1	1	-																					-					
1.14) REDUCTION GEAR (INDEPENDENCE VARIANT)																																
11		2015	NAVY	1	1	-																					-					
1.15) ELECTRONIC SUPPORT MEASURES																																
12		2017	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-							
1.17) MAIN PROPULSION DIESEL ENGINE (FREEDOM VARIANT)																																
13		2014	NAVY	1	1	-																					-					
13		2015	NAVY	1	1	-																					-					
1.18) SHIPS SERVICE DIESEL GENERATOR (FREEDOM VARIANT)																																
14		2014	NAVY	1	1	-																					-					
14		2015	NAVY	1	1	-																					-					
							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 2017 Navy Date: February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment Aggregated Items: LCS Class Support Equipment

Items (Units in Each)					Fiscal Year 2018													Fiscal Year 2019												BALANCE						
OC	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019																
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP					
	14	2016	NAVY	1	1	-																														-
	14	2017	NAVY	1	-	1	-	-	-	-	1																									-

2) LN002 LCS Water jet Spares

2.1) WATERJET ASSEMBLY (FREEDOM VARIANT)																																				
	15	2013	NAVY	1	1	-																													-	
	15	2014	NAVY	3	3	-																														-
	15	2017	NAVY	5	-	5	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	1	-	1				-	
2.2) WATERJET IMPELLER (INDEPENDENCE VARIANT)																																				
	16	2013	NAVY	3	3	-																													-	
	16	2014	NAVY	4	4	-																													-	
	16	2017	NAVY	2	-	2	2																													-

4) LN004 Habitability Modification

4.1) HABITABILITY MOD (FRE VARIANT)																																				
	17	2016	NAVY	1	1	-																													-	
4.2) HABITABILITY MOD (IND VARIANT)																																				
	18	2016	NAVY	1	1	-																														-
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0944 / LCS Class Support Equipment	Aggregated Items: LCS Class Support Equipment
---	--	---

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	MTU - GERMANY	-	-	-	12	-	12	12	12	12	-	12	12
2	ROLLS ROYCE - WALEPOLE, MA	-	-	-	24	-	24	24	24	24	-	24	24
3	MTU - GERMANY	-	-	-	12	-	12	12	12	12	-	12	12
4	Oldenburg Group Inc. - Kingsford, MI	-	-	-	18	-	18	18	18	18	-	18	18
5	SPERRY - Charlottesville, VA	-	-	-	12	-	12	12	12	12	-	12	12
6	Saab Sensis Corporation - Reston, VA	-	-	-	15	-	15	15	15	15	-	15	15
7	Lockheed Martin - MD	-	-	-	15	-	15	15	15	15	-	15	15
8	Austal - AL	-	-	-	17	-	17	17	17	17	-	17	17
9	TBD - TBD	-	-	-	-	-	18	18	18	-	-	18	18
10	Fairbanks Morse - Beloit WI	-	-	-	18	-	18	18	18	18	-	18	18
11	Fincantieri - Washington, DC	-	-	-	12	-	12	12	12	12	-	12	12
12	Rolls Royce - MS	-	-	-	24	-	24	24	24	24	-	24	24
13	Wartsilla - VA	-	-	-	24	-	24	24	24	12	-	12	12
14	FRE Variant (LM) - Marinette, WI	-	-	-	-	-	6	6	6	-	-	-	-
15	IND Variant (Austal) - Mobile, AL	-	-	-	-	-	6	6	6	-	-	-	-

"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).

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0945 / Submarine Batteries

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	313.684	32.752	23.072	23.359	-	23.359	17.525	15.232	15.664	15.982	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	313.684	32.752	23.072	23.359	-	23.359	17.525	15.232	15.664	15.982	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	313.684	32.752	23.072	23.359	-	23.359	17.525	15.232	15.664	15.982	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procurement of Valve Regulated Lead Acid (VRLA) batteries and Shipalt installation to modify submarines from use of legacy flooded battery (no longer in production at former sole source manufacturer) to new design VRLA battery. Initial installations of VRLA battery also requires the installation of an Automatic Battery Monitoring system (ABMS). The budget procures and installs initial VRLA batteries for 31 SSN688 Class, 3 SSN21 Class, 4 SSGN Class, 10 SSBN Class and 6 SSN774 Class Submarines. Batteries have a finite life and are consumables. Therefore, the budget also procures replacement VRLA batteries at a notional 6 year replacement cycle. Procurement with ABMS are new installation and procurement without ABMS are life cycle replacements. Installation of replacement batteries is funded by the Submarine Type Commander.

[P40A / HM002 - LOS ANGELES Class Main Storage Battery]: Procurement of a low maintenance sealed lead acid battery which involves adapting commercial Valve Regulated Lead Acid (VRLA) technology to submarines. This replaces flooded battery technology for which the industrial base ceased manufacture and support of in FY05. Installation of VRLA battery requires extensive battery well modification (SHIPALT) unique for each submarine class. All dates for VRLA installation on Los Angeles Class submarines are based on the FMPMIS schedule of Mar 2015. Installation unit costs vary due to the availability types, location of installation and submarine type. Ships are shown below in the FY of installation funding.

Availability Types: DMP Depot Modernization Period EOH Engineered Overhaul
 DSRA Drydocking Selected Restricted Availability
 Prior Years
 SSN 768 DMP SSN 770 DMP SSN 723 EOH SSN 725 EOH SSN 767 DSRA SSN 762 DSRA SSN 750 EOH
 SSN 763 DMP SSN 772 DMP SSN 764 DSRA SSN 721 EOH SSN 751 EOH SSN 766 DSRA SSN 755 EOH
 SSN 724 EOH SSN 773 DMP SSN 719 DSRA SSN 761 DSRA SSN 722 EOH SSN 752 EOH SSN 720 DSRA
 SSN 771 DSR ASSN 754 EOH SSN 753 EOH SSN 769 DSRA SSN 757 EOH SSN 758 EOH SSN 756 EOH SSN 760 EOH SSN 759 EOH

FY16 - FY19 None
 FY20 - SSN 765 EOH

[P40A / HM008 - OHIO Class Main Storage Battery]: Procurement of a low maintenance sealed lead acid battery which involves adapting commercial Valve Regulated Lead Acid (VRLA) technology to submarines. This replaces flooded battery technology for which the industrial base ceased manufacture and support of in FY05. Installation of VRLA battery requires extensive battery well modification

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0945 / Submarine Batteries
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>(SHIPALT) unique for each submarine class. All dates for VRLA installation on Ohio Class submarines are based on the FMPMIS schedule of Mar 2015. Installation unit costs vary due to the availability types, location of installation and submarine type. Ships are shown below in the FY of installation funding.</p> <p>Availability Types: ERO Engineered Refueling Overhaul ERP Extended Refit Period MMP Major Maintenance Period</p> <p>Prior Years SSBN 740 ERP SSBN 743 ERP SSBN 741 ERP SSBN 735 ERO (SCN Procurement) SSBN 742 ERP SSBN 737 ERO SSGN 729 MMP SSBN 736 ERO SSBN 738 ERO SSGN 726 ERP SSGN 728 MMP SSBN 739 ERO SSGN 727 ERP</p> <p>FY16 - None</p> <p>FY17 - SSBN 730 ERP</p> <p>[P40A / HM009 - SEAWOLF Class Main Storage Battery]: Procurement of a low maintenance sealed lead acid battery which involves adapting commercial Valve Regulated Lead Acid (VRLA) technology to submarines. This replaces flooded battery technology for which the industrial base ceased manufacture and support of in FY05. Installation of VRLA battery requires extensive battery well modification (SHIPALT) unique for each submarine class. All dates for VRLA installation on SEAWOLF Class submarines are based on the FMPMIS schedule of Mar 2015. Installation unit costs vary due to the availability types, location of installation and submarine type. SEAWOLF class installation of VRLA Shipalt was completed in FY08. Availability Types: DPMA Drydocking Phased Maintenance Availability Special Non-CNO Scheduled Availability</p> <p>Prior Years - SSN 22 Special SSN 21 Special SSN 23 DPMA</p> <p>[P40A / HM010 - VIRGINIA Class Main Storage Battery]: Procurement of a low maintenance sealed lead acid battery which involves adapting commercial Valve Regulated Lead Acid (VRLA) technology to submarines. This replaces flooded battery technology for which the industrial base ceased manufacture and support of in FY05. Installation of VRLA battery requires extensive battery well modification (SHIPALT) unique for each submarine class. All dates for VRLA installation on Virginia Class submarines are based on the FMPMIS schedule of Mar 2015. Installation unit costs vary due to the availability types, location of installation and submarine type. Ships are shown below in the FY of installation funding.</p> <p>Availability Types: EDSRA Extended Drydocking Selected Restricted Availability</p> <p>Prior Years - SSN 774 EDSRA SSN 775 EDSRA SSN 776 EDSRA</p> <p>FY16 - SSN 777 EDSRA</p> <p>FY17 - SSN 778 EDSRA</p> <p>FY18 - SSN 779 EDSRA</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0945 / Submarine Batteries
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / HM830 - Production Engineering]: NSWCR Crane, as the designated procurement activity and in-service engineering agent (ISEA) monitors battery performance and establishes replacement schedules with the fleet. NSWCR Crane is also tasked with leading a Government & Industry Root Cause Analysis (RCA) team to identify and address causes for premature capacity decline seen with VLRA batteries. NSWCR Crane conducts qualification testing of VRLA cells which, in addition to being a Performance Specification requirement, has proven very beneficial to the Navy in detecting battery deficiencies that can be corrected before installation, thus alleviating critical emergent fleet impact. Funding is provided for Puget Sound and Portsmouth Naval Shipyards responsibilities for the flooded battery inventory storage, maintenance and inventory management, SHIPALT support, and AIT management. In addition, costs for Planning Yard SHIPALT completion and Lead Yard Services are funded through this line. Beginning in FY13, additional funding will be provided to Puget Sound and Portsmouth Naval Shipyards in order to operate and maintain VRLA battery test facilities. These facilities will be used for testing that will ensure that batteries are fully operational prior to installation, isolate underperforming cells, and to determine the end of life profile which will reduce impacts to the fleet caused by unexpected battery capacity declines.</p> <p>[P3A / HM002 LOS ANGELES Class Main Battery VRLA & ABMS]: INSTALLATION - HM5IN Installation funds are provided to the AITs to accomplish execution of new VRLA battery installations in submarines. Installation of replacement batteries is funded by the TYCOM. Installation unit costs will vary due to the availability types, location of installation, and submarine type.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0945 / Submarine Batteries

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Equipment	P-5a		- / 83.307	- / 18.109	- / 13.414	- / 13.017	- / -	- / 13.017
P-3a	1 / HM002 LOS ANGELES Class Main Battery VRLA & ABMS (SHIPALT)			- / 146.499	- / 3.850	- / -	- / -	- / -	- / -
P-3a	2 / HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS (SHIPALT)			- / 68.080	- / 3.373	- / 2.419	- / 3.874	- / -	- / 3.874
P-3a	3 / HM010 VIRGINIA Class Main Storage Battery VRLA (SHIPALT)			- / 15.798	- / 7.420	- / 7.239	- / 6.468	- / -	- / 6.468
P-40	Total Gross/Weapon System Cost			- / 313.684	- / 32.752	- / 23.072	- / 23.359	- / -	- / 23.359
Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Equipment	P-5a		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / HM002 LOS ANGELES Class Main Battery VRLA & ABMS (SHIPALT)			- / -	- / 1.166	- / 2.942	- / -	- / -	- / 154.457
P-3a	2 / HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS (SHIPALT)			- / -	- / -	- / -	- / -	- / -	- / 77.746
P-3a	3 / HM010 VIRGINIA Class Main Storage Battery VRLA (SHIPALT)			- / 4.159	- / -	- / -	- / -	- / -	- / 41.084
P-40	Total Gross/Weapon System Cost			- / 17.525	- / 15.232	- / 15.664	- / 15.982	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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0945 / Submarine Batteries **Aggregated Items Title:** Equipment ⁽¹⁾

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) HM002 - LOS ANGELES Class Main Storage Battery																				
1.1) VRLA LOS ANGELES ^(†)	A		1,320K	4	5.282	627,333.33	1	0.627	690,333.33	3	2.071	759,000.00	2	1.518	-	-	-	759,000.00	2	1.518
1.2) VRLA Los Angeles Material	A		-	-	10.120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) HM002 - LOS ANGELES Class Main Storage Battery			-	-	15.402	-	-	0.627	-	-	2.071	-	-	1.518	-	-	-	-	-	1.518
2) HM008 - OHIO Class Main Storage Battery																				
2.1) VRLA OHIO ^(†)	A		2,085K	5	10.424	1,912K	2	3.825	1,192K	2	2.385	1,310K	1	1.310	-	-	-	1,310K	1	1.310
2.2) VRLA OHIO Material	A		-	-	9.356	-	-	1.300	-	-	0.586	-	-	-	-	-	-	-	-	-
Subtotal: 2) HM008 - OHIO Class Main Storage Battery			-	-	19.780	-	-	5.125	-	-	2.971	-	-	1.310	-	-	-	-	-	1.310
3) HM009 - SEAWOLF Class Main Storage Battery																				
3.1) VRLA Seawolf	A		649,333.33	3	1.948	-	-	-	-	-	-	823,000.00	2	1.646	-	-	-	823,000.00	2	1.646
3.2) VRLA Seawolf + ABMS	A		1,179K	3	3.536	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) HM009 - SEAWOLF Class Main Storage Battery			-	-	5.484	-	-	-	-	-	-	-	-	1.646	-	-	-	-	-	1.646
4) HM010 - VIRGINIA Class Main Storage Battery																				
4.1) VIRGINIA ^(†)	A		1,368K	1	1.368	945,000.00	3	2.835	748,000.00	1	0.748	823,000.00	1	0.823	-	-	-	823,000.00	1	0.823
4.2) VRLA VIRGINIA Material	A		-	-	3.974	-	-	4.669	-	-	2.813	-	-	2.863	-	-	-	-	-	2.863
Subtotal: 4) HM010 - VIRGINIA Class Main Storage Battery			-	-	5.342	-	-	7.504	-	-	3.561	-	-	3.686	-	-	-	-	-	3.686
5) HM830 - Production Engineering																				
5.1) Production Engineering	A		-	-	37.299	-	-	4.853	-	-	4.811	-	-	4.857	-	-	-	-	-	4.857
Subtotal: 5) HM830 - Production Engineering			-	-	37.299	-	-	4.853	-	-	4.811	-	-	4.857	-	-	-	-	-	4.857
Total			-	-	83.307	-	-	18.109	-	-	13.414	-	-	13.017	-	-	-	-	-	13.017

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) Material funds identified are for ancillary material required to set up for and support installations. Starting in FY12, these funds are moved from installation to procurement and shown as separate line items to better reflect the required funding profile. (2) FY14 VRLA OHIO and VIRGINIA replacement batteries (without ABMS) included replacement trays to support life cycle replacement logistics.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Aggregated Items: Equipment ⁽¹⁾
---	--	--

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) HM002 - LOS ANGELES Class Main Storage Battery												
1.1) VRLA LOS ANGELES		2014 ⁽²⁾	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANENSWC CRANENSWC CRANE	Jan 2014	Jan 2015	2	584,600.00	Y		
1.1) VRLA LOS ANGELES		2015	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANENSWC CRANENSWC CRANENSWC CRANE	Feb 2015	Feb 2016	1	627,333.33	Y		
1.1) VRLA LOS ANGELES		2016	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANENSWC CRANENSWC CRANENSWC CRANE	Feb 2016	Feb 2017	3	690,333.33	Y		
1.1) VRLA LOS ANGELES		2017	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2017	Feb 2018	2	759,000.00	Y		
2) HM008 - OHIO Class Main Storage Battery												
2.1) VRLA OHIO		2014	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Dec 2013	Dec 2014	2	2,530K	Y		
2.1) VRLA OHIO		2015	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Jan 2015	Jan 2016	2	1,912K	Y		
2.1) VRLA OHIO		2016	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2016	Feb 2017	2	1,192K	Y		
2.1) VRLA OHIO		2017	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2017	Feb 2018	1	1,310K	Y		
4) HM010 - VIRGINIA Class Main Storage Battery												
4.1) VIRGINIA		2014	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Jan 2014	Jan 2015	1	1,368K	Y		
4.1) VIRGINIA		2015	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Mar 2015	Mar 2016	3	945,000.00	Y		
4.1) VIRGINIA		2016	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2016	Feb 2017	1	748,000.00	Y		
4.1) VIRGINIA		2017	ENERSYS & GNB (Exide) / Warrensburg, MO & Ft. Smith , AR	C / IDIQ	NSWC CRANE	Feb 2017	Feb 2018	1	823,000.00	Y		

Footnotes:

⁽²⁾ (1) Production Lead time is 6-12 months for all classes. (2) FY14-FY17 VRLA battery procurements, for all classes, will be on a C/FP (IDIQ) contract which will be a split award between Enersys & GNB (Exide). The initial contract award took place in March 2013. Delivery orders will be placed, as needed, for additional procurement thereafter.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0945 / Submarine Batteries				Modification Number / Title: 1 / HM002 LOS ANGELES Class Main Battery VRLA & ABMS				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	146.499	3.850	-	-	-	-	-	1.166	2.942	-	-	154.457
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	146.499	3.850	-	-	-	-	-	1.166	2.942	-	-	154.457
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	146.499	3.850	-	-	-	-	-	1.166	2.942	-	-	154.457
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

VRLA Shipalt is required to modify LA Class submarines from use of legacy flooded battery (no longer in production at former sole source manufacturer) to new design VRLA battery. Installation unit costs may vary depending on location and type of availability. Replacement batteries are not shown because installations are funded by TYCOM.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Modification Number / Title: 1 / HM002 LOS ANGELES Class Main Battery VRLA & ABMS

Models of Systems Affected: LOS ANGELES CLASS MAIN STORAGE BATTERY VRLA LOS ANGELES + ABMS	Modification Type: SHIPALT	Related RDT&E PEs:
---	-----------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: HM002 LOS ANGELES Class Main Battery VRLA & ABMS												
B Kits												
Recurring												
1.1.1) HM002 LOS ANGELES CLASS BATTERY VRLA & ABMS INSTALL - NonOrganic ⁽³⁾	30 / 23.274	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.166	- / -	- / -	- / -	31 / 24.440
<i>Subtotal: Recurring</i>	- / 23.274	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.166	- / -	- / -	- / -	- / 24.440
<i>Subtotal: HM002 LOS ANGELES Class Main Battery VRLA & ABMS</i>	30 / 23.274	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.166	- / -	- / -	- / -	31 / 24.440
<i>Subtotal: Procurement, All Modification Items</i>	- / 23.274	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.166	- / -	- / -	- / -	- / 24.440

Installation

Modification Item 1 of 1: HM002 LOS ANGELES Class Main Battery VRLA & ABMS	- / 123.225	- / 3.850	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.942	- / -	- / -	- / 130.017
<i>Subtotal: Installation</i>	- / 123.225	- / 3.850	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.942	- / -	- / -	- / 130.017

Total												
Total Cost (Procurement + Support + Installation)	146.499	3.850	-	-	-	-	-	1.166	2.942	-	-	154.457

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Modification Number / Title: 1 / HM002 LOS ANGELES Class Main Battery VRLA & ABMS

Modification Item 1 of 1: HM002 LOS ANGELES Class Main Battery VRLA & ABMS

Manufacturer Information

Manufacturer Name: ENERSYS ⁽⁴⁾				Manufacturer Location: WARRENSURG. MO			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 12			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: ENERSYS & GNB (Exide)				Manufacturer Location: WARRENSURG. MO & Ft. Smith, AR			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 12			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: HM002 LOS ANGELES CLASS BATTERY VRLA & ABMS INSTALL

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	29 / 123.225	1 / 3.850	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	30 / 127.075
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.942	- / -	- / -	1 / 2.942
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	29 / 123.225	1 / 3.850	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.942	- / -	- / -	31 / 130.017

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	29	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
Out	27	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Modification Number / Title: 1 / HM002 LOS ANGELES Class Main Battery VRLA & ABMS

Footnotes:

⁽³⁾ (1) Installation funds must be in place at the start of availability. The availability start date can be up to six (6) months prior to battery delivery. (2) In FY12 and later, a realignment of ancillary material costs from Installation to Procurement took place as noted in the P-40A remarks.

⁽⁴⁾ Production Leadtime can range from 6-12 months

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0945 / Submarine Batteries			Modification Number / Title: 2 / HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS					

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	68.080	3.373	2.419	3.874	-	3.874	-	-	-	-	-	77.746
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	68.080	3.373	2.419	3.874	-	3.874	-	-	-	-	-	77.746
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	68.080	3.373	2.419	3.874	-	3.874	-	-	-	-	-	77.746
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

VRLA Shipalt is required to modify OHIO Class submarines from use of legacy flooded battery (no longer in production at former sole source manufacturer) to new design VRLA battery. Installation unit costs may vary depending on location and type of availability. Replacement batteries are not shown because installations are funded by TYCOM.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0945 / Submarine Batteries					Modification Number / Title: 2 / HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS			
Models of Systems Affected: OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS				Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS</i>													
B Kits													
Recurring													
1.1.1) HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS - NonOrganic ⁽⁵⁾	12 / 24.500	- / -	1 / 2.419	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 26.919	
<i>Subtotal: Recurring</i>	<i>- / 24.500</i>	<i>- / -</i>	<i>- / 2.419</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 26.919</i>	
<i>Subtotal: HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS</i>	<i>12 / 24.500</i>	<i>- / -</i>	<i>1 / 2.419</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>13 / 26.919</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 24.500</i>	<i>- / -</i>	<i>- / 2.419</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 26.919</i>	
Installation													
<i>Modification Item 1 of 1: HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS</i>													
<i>Subtotal: Installation</i>	<i>- / 43.580</i>	<i>- / 3.373</i>	<i>- / -</i>	<i>- / 3.874</i>	<i>- / -</i>	<i>- / 3.874</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 50.827</i>	
Total	68.080	3.373	2.419	3.874	-	3.874	-	-	-	-	-	77.746	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Modification Number / Title: 2 / HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS

Modification Item 1 of 1: HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS

Manufacturer Information							
Manufacturer Name: ENERSYS ⁽⁶⁾				Manufacturer Location: WARRENSURG. MO			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 12			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							
Manufacturer Name: ENERSYS & GNB (Exide)				Manufacturer Location: WARRENSURG. MO & Ft. Smith, AR			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 12			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Nov 2014	Jan 2016					
Delivery Dates	Sep 2015	Jan 2017					

Installation Information

Method of Implementation: AIT:: Installation Name: HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	12 / 43.580	- / 3.373	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	12 / 46.953
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	1 / 3.874	- / -	1 / 3.874	- / -	- / -	- / -	- / -	- / -	1 / 3.874
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	12 / 43.580	- / 3.373	- / -	1 / 3.874	- / -	1 / 3.874	- / -	- / -	- / -	- / -	- / -	13 / 50.827

Installation Schedule																															
	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	12	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Out	11	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Modification Number / Title: 2 / HM008 OHIO CLASS MAIN STORAGE BATTERY VRLA + ABMS

Footnotes:

⁽⁵⁾ (1) Installation funds must be in place at the start of availability. The availability start date can be up to six (6) months prior to battery delivery. (2) The delivery date identified at the top of the page is the battery delivery date and not the start of the availability. (3) In FY12 and later, a realignment of ancillary material costs from Installation to Procurement took place as noted in the P-40A remarks.

⁽⁶⁾ Production Leadtime can range from 6-12 months

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0945 / Submarine Batteries			Modification Number / Title: 3 / HM010 VIRGINIA Class Main Storage Battery VRLA					

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	15.798	7.420	7.239	6.468	-	6.468	4.159	-	-	-	-	41.084
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	15.798	7.420	7.239	6.468	-	6.468	4.159	-	-	-	-	41.084
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	15.798	7.420	7.239	6.468	-	6.468	4.159	-	-	-	-	41.084
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

VRLA Shipalt is required to modify VIRGINIA Class submarines from use of legacy flooded battery (no longer in production at former sole source manufacturer) to new design VRLA battery. Installation unit cost may vary depending on location and type of availability. Replacement batteries are not shown because installations are funded by TYCOM.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Modification Number / Title: 3 / HM010 VIRGINIA Class Main Storage Battery VRLA

Models of Systems Affected: VIRGINIA Class Main Storage Battery VRLA + ABMS	Modification Type: SHIPALT	Related RDT&E PEs:
--	-----------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> HM010 VIRGINIA Class Main Storage Battery VRLA												
B Kits												
Recurring												
1.1.1) HM010 VIRGINIA Class Main Storage Battery VRLA - NonOrganic ⁽⁷⁾	3 / 4.918	1 / 1.741	1 / 1.852	1 / 1.974	- / -	1 / 1.974	- / -	- / -	- / -	- / -	- / -	6 / 10.485
<i>Subtotal: Recurring</i>	- / 4.918	- / 1.741	- / 1.852	- / 1.974	- / -	- / 1.974	- / -	- / -	- / -	- / -	- / -	- / 10.485
<i>Subtotal: HM010 VIRGINIA Class Main Storage Battery VRLA</i>	3 / 4.918	1 / 1.741	1 / 1.852	1 / 1.974	- / -	1 / 1.974	- / -	- / -	- / -	- / -	- / -	6 / 10.485
<i>Subtotal: Procurement, All Modification Items</i>	- / 4.918	- / 1.741	- / 1.852	- / 1.974	- / -	- / 1.974	- / -	- / -	- / -	- / -	- / -	- / 10.485
Installation												
<i>Modification Item 1 of 1:</i> HM010 VIRGINIA Class Main Storage Battery VRLA	- / 10.880	- / 5.679	- / 5.387	- / 4.494	- / -	- / 4.494	- / 4.159	- / -	- / -	- / -	- / -	- / 30.599
<i>Subtotal: Installation</i>	- / 10.880	- / 5.679	- / 5.387	- / 4.494	- / -	- / 4.494	- / 4.159	- / -	- / -	- / -	- / -	- / 30.599
Total												
Total Cost (Procurement + Support + Installation)	15.798	7.420	7.239	6.468	-	6.468	4.159	-	-	-	-	41.084

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0945 / Submarine Batteries	Modification Number / Title: 3 / HM010 VIRGINIA Class Main Storage Battery VRLA

Modification Item 1 of 1: HM010 VIRGINIA Class Main Storage Battery VRLA

Manufacturer Information							
Manufacturer Name: ENERSYS & GNB (Exide)				Manufacturer Location: WARRENSURG. MO & Ft. Smith, AR			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 12			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	May 2015	Apr 2016					
Delivery Dates	May 2016	Apr 2017					

Installation Information

Method of Implementation: AIT:: Installation Name: HM010 VIRGINIA Class Main Storage Battery VRLA

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 10.880	1 / 5.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	3 / 16.559
FY 2015	- / -	- / -	1 / 5.387	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.387
FY 2016	- / -	- / -	- / -	1 / 4.494	- / -	1 / 4.494	- / -	- / -	- / -	- / -	- / -	1 / 4.494
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.159	- / -	- / -	- / -	- / -	1 / 4.159
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 10.880	1 / 5.679	1 / 5.387	1 / 4.494	- / -	1 / 4.494	1 / 4.159	- / -	- / -	- / -	- / -	6 / 30.599

Installation Schedule																																
	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	2	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Out	2	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6

Footnotes:
⁽⁷⁾ (1) Installation funds must be in place at the start of availability. The availability start date can be up to six (6) months prior to battery delivery. (2) The delivery date identified at the top of the page is the battery delivery date and not the start of the availability. (3) In FY12 and later, a realignment of ancillary material costs from Installation to Procurement took place as noted in the P-40A remarks.

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0946 / LPD Class Support Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	33.273	35.979	45.929	40.321	-	40.321	61.949	75.762	75.952	77.496	22.574	469.235
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	33.273	35.979	45.929	40.321	-	40.321	61.949	75.762	75.952	77.496	22.574	469.235
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	33.273	35.979	45.929	40.321	-	40.321	61.949	75.762	75.952	77.496	22.574	469.235

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2015 funding request was reduced by \$3.540 million by the department in support of high priority requirements.

The FY 2016 funding request was reduced by \$2 million to account for HW/SW obsolescence excess installation funding and \$7.354 million to account for prior year carryover due to contract delays.

The FY 2017 funding request was reduced \$4.200 million to account for the availability of prior year balances.

This budget provides funding for the in service LPD 17 class program support equipment. Previous funding for LPD 17 class support equipment (FY12 and earlier) was provided under line item OPN 0981, Items Less Than \$5 Million. Funding is required to upgrade mission critical electronic and HM&E systems including the Engineering Control Systems (ECS), Ship Control Systems (SCS), Degaussing Systems, Shipboard Wide-Area Network (SWAN), commercial software products for ECS, SCS, C4ISR and Administrative Communications.

[P40A / CJ010 - Schoolhouse TTE]: CJ010 - SCHOOLHOUSE TTE

Funding for Schoolhouse Technical Training Equipment (TTE) is for the infrastructure and equipment to set up the schoolhouses for multiple systems such as ECS and SCS 60Hz and Ship Service Diesel Generators (SSDG). The schoolhouses will provide critical training to sailors in operation and maintenance of those systems.

[P40A / CJ020 - Shore Based Spares]: CJ020 SHORE BASED SPARES

Shore-Based Spares funding is required for procurement of Shore-Based Spares in support of the LPD 17 class deployed assets. Shore-Based Spares are critical long lead time items that will be staged shoreside in case of catastrophic failure.

[P3A / CJ030 - HW/SW Obsolescence]: CJ030 LPD 17 Hardware/Software HW/SW Obsolescence effort addresses critical hardware obsolescence and technology refreshment issues and supporting class upgrades focused on increased capability and reliability. Funding will support procurement of hardware and software changes to the systems listed:

- Command Information Display System (CIDS) 23TV, Replace projectors with LED Projectors
- Engineering Control Systems (ECS) - Windows XP upgrade
- Ship Control Systems (SCS) - Windows XP upgrade/SCS Tech Refresh, Digital Rudder Angle Display Information System (DRADIS)

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<ul style="list-style-type: none"> - Magnetic Signature Control System (MSCS) - Windows XP upgrade, DCA Redesign. - HM&E Network - HM&E Network Upgrades - Wire-free Portable Communication System (WPCS) - Uninterrupted Power Supply (UPS) Upgrade, Low Power Amplifier Upgrade, Main Site Upgrade.- 27TV - 27TV System Upgrade - Advanced Fire and Smoke Sensor System (AFSS) - AFSS System Upgrade. - Integrated Voice Communication System (IVCS) - IVCS system upgrades (local cutout switches, AFT lookout comm mod, obsolete terminal replacement, FWD/AFT KITE), Software version 7.2.2 - 1MC Announcing System - Digital Microphone Control Station - Navigational Data Distribution System (NDDS) <p>[P3A - 2 / CJ040 HM&E Electrical Modifications]: CJ040 HM&E ELECTRICAL MODIFICATIONS HME Modernization funding is provided to correct mission, safety and reliability issues on electrical systems and ultimately resolve maintenance intensive system concerns. HM&E Electrical Modifications include: SWAN UPS- Space Based UPS Reduction</p> <p>[P3A - 3 / CJ050 - HM&E Survivability Modifications]: CJ050 HM&E SURVIVABILITY MODIFICATIONSHME Modernization funding is provided to correct mission, safety and reliability issues on HM&E systems (impacting ship survivability) and ultimately resolve maintenance intensive system concerns. HM&E Survivability Modifications include: Damage Control Action Management System (DCAMS) 1.1 upgrade, Smoke Ejection System (SES) Redesign, Night Vision Device (NVD) Well Deck Upgrades, Composite Ventilation Louvers and Screens.</p> <p>[P3A - 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications]: CJ060 HM&E MECHANICAL/AUXILIARY MODIFICATIONSHME Modernization funding is provided to correct mission, safety and reliability issues on mechanical and auxiliary systems and ultimately resolve maintenance intensive system concerns. HM&E Mechanical/ Auxiliary Modifications include: MIDE Bulkhead Shaft Seal, Helo Hangar Door Control Modifications, VCHT Ejector Pump PLC Upgrade, 2nd Pass Reverse Osmosis (RO) Unit Upgrade, RO Unit Potable Water EDG Recirculation Capability, Aviation Maintenance Bridge Crane Replacement, Knuckleboom Crane Improvements, Geislinger Coupling Improvements, Scullery Improvements and Gaylord System Improvements.</p> <p>[P3A - 5 / CJ070 SWAN-CANES Integration]: CJ070 SWAN-CANES Integration The results of the Shipboard Wide Area Network (SWAN) / Consolidated Afloat Networks and Enterprise Services (CANES) study directed the replacement of the C4I capability of the LPD 17 Class SWAN with CANES and the conversion of the non-C4I SWAN into a new HM&E Network (mini SWAN). SWAN funding is required to field the new HM&E Network in support of the CANES installation. In addition, funding is required to sustain the legacy SWAN, while the LPD 17 Class ships await the CANES/HM&E Network back fit installation. SWAN serves as the backbone of the LPD 17 class and funding is necessary to address obsolescence, reliability issues, performance concerns, emergent Fleet requirements including enabling Cryptologic Log On (CLO), eradicating Windows XP, replacing aging obsolete network hardware (e.g., servers and core switches), and maintaining the Information Assurance posture of the Common Operating Environment (COE). This funding is vital to ensure the LPD 17 Class ships can combat the evolving cyber threat.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0946 / LPD Class Support Equipment

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	LPD Class Support Equipment			- / 6.400	- / 3.500	- / 5.299	- / -	- / -	- / -
P-3a	1 / CJ030 - HW/SW Obsolescence (TBD)			- / 11.274	- / 4.290	- / 4.846	- / 6.756	- / -	- / 6.756
P-3a	2 / CJ040 HM&E Electrical Modifications (TBD)			- / 0.000	- / -	- / 2.244	- / 4.628	- / -	- / 4.628
P-3a	3 / CJ050 - HM&E Survivability Modifications (TBD)			- / 0.120	- / 0.736	- / 0.092	- / -	- / -	- / -
P-3a	4 / CJ060 - HM&E Mechanical/Auxiliary Modifications (TBD)			- / 5.379	- / 23.063	- / 19.902	- / 12.401	- / -	- / 12.401
P-3a	5 / CJ070 SWAN-CANES Integration (TBD)			- / 10.100	- / 4.390	- / 13.546	- / 16.536	- / -	- / 16.536
P-40	Total Gross/Weapon System Cost			- / 33.273	- / 35.979	- / 45.929	- / 40.321	- / -	- / 40.321

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	LPD Class Support Equipment			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / CJ030 - HW/SW Obsolescence (TBD)			- / 18.149	- / 27.353	- / 20.196	- / 27.252	- / 6.000	- / 126.116
P-3a	2 / CJ040 HM&E Electrical Modifications (TBD)			- / 2.797	- / 1.842	- / 1.600	- / 0.300	- / 1.496	- / 14.907
P-3a	3 / CJ050 - HM&E Survivability Modifications (TBD)			- / 2.429	- / 1.627	- / 2.826	- / 1.526	- / -	- / 9.356
P-3a	4 / CJ060 - HM&E Mechanical/Auxiliary Modifications (TBD)			- / 16.946	- / 32.844	- / 37.100	- / 35.864	- / 11.869	- / 195.368
P-3a	5 / CJ070 SWAN-CANES Integration (TBD)			- / 12.593	- / 9.296	- / 10.030	- / 8.254	- / -	- / 84.745
P-40	Total Gross/Weapon System Cost			- / 61.949	- / 75.762	- / 75.952	- / 77.496	- / 22.574	- / 469.235

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Aggregated Items Title: LPD Class Support Equipment
---	--	---

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) CJ010 - Schoolhouse TTE ⁽¹⁾																				
1.1) Schoolhouse TTE (2)	A		-	-	1.200	-	-	-	-	-	1.705	-	-	-	-	-	-	-	-	-
Subtotal: 1) CJ010 - Schoolhouse TTE			-	-	1.200	-	-	-	-	-	1.705	-	-	-	-	-	-	-	-	-
2) CJ020 - Shore Based Spares																				
2.1) Shore Based Spares	A		-	-	5.200	-	-	3.500	-	-	3.594	-	-	-	-	-	-	-	-	-
Subtotal: 2) CJ020 - Shore Based Spares			-	-	5.200	-	-	3.500	-	-	3.594	-	-	-	-	-	-	-	-	-
Total			-	-	6.400	-	-	3.500	-	-	5.299	-	-	-	-	-	-	-	-	-

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

Footnotes:

⁽¹⁾ *CJ010-SCHOOLHOUSE TTE Program growth from PB16-PB17 in FY16 and FY17 is associated with Information Awareness (IA) and Cybersecurity compliance requirements established per Department of the Navy Chief Information Office(DON CIO) guidance. As such, software changes associated with Windows 10 compliance must be developed and implemented at the various schoolhouse training sites.

⁽²⁾ FY15 request reduced by \$1M to support higher department priorities.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 1 / CJ030 - HW/SW Obsolescence
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	11.274	4.290	4.846	6.756	-	6.756	18.149	27.353	20.196	27.252	6.000	126.116
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	11.274	4.290	4.846	6.756	-	6.756	18.149	27.353	20.196	27.252	6.000	126.116
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	11.274	4.290	4.846	6.756	-	6.756	18.149	27.353	20.196	27.252	6.000	126.116

(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:

[HW/SW Obsolescence] HW/SW Obsolescence effort addresses hardware obsolescence/technology refreshment issues, and class upgrades focused on increased capabilities, force protection, and safety. Funding will support procurement of hardware and software changes to the systems listed:

- Command Information Display System (CIDS) 23TV - Replace projectors with LED Projectors
- Engineering Control Systems (ECS) - Windows XP upgrade
- Ship Control Systems (SCS) - Windows XP upgrade/SCS Tech Refresh, Digital Rudder Angle Display Information System (DRADIS)
- Magnetic Signature Control System (MSCS) - Windows XP upgrade
- Wire-free Portable Communication System (WPCS) - Uninterrupted Power Supply (UPS) Upgrade, Low Power Amplifier Upgrade
- 27TV - 27TV System Upgrade
- Advanced Fire and Smoke Sensor System (AFSS) - AFSS System Upgrade
- Integrated Voice Communication System (IVCS)- IVCS system upgrades (local cutout switches, AFT lookout comm mod, obsolete terminal replacement, FWD/AFT KITE), Software version 7.2.2.
- 1MC Announcing System - Digital Microphone Control Station 1MC improvements
- Navigational Data Distribution System (NDDS)

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 1 / CJ030 - HW/SW Obsolescence

Models of Systems Affected: HW/SW Obsolescence	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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

<i>Modification Item 1 of 1:</i> CJ030 - HW/SW Obsolescence												
B Kits												
Recurring												
1.1.1) HW/SW Obsolescence - NonOrganic ⁽³⁾	42 / 9.195	12 / 1.970	9 / 2.335	8 / 2.525	- / -	8 / 2.525	16 / 14.622	25 / 14.999	8 / 5.200	6 / 11.376	- / -	126 / 62.222
<i>Subtotal: Recurring</i>	- / 9.195	- / 1.970	- / 2.335	- / 2.525	- / -	- / 2.525	- / 14.622	- / 14.999	- / 5.200	- / 11.376	- / -	- / 62.222
<i>Subtotal: CJ030 - HW/SW Obsolescence</i>	42 / 9.195	12 / 1.970	9 / 2.335	8 / 2.525	- / -	8 / 2.525	16 / 14.622	25 / 14.999	8 / 5.200	6 / 11.376	- / -	126 / 62.222
<i>Subtotal: Procurement, All Modification Items</i>	- / 9.195	- / 1.970	- / 2.335	- / 2.525	- / -	- / 2.525	- / 14.622	- / 14.999	- / 5.200	- / 11.376	- / -	- / 62.222

Installation

<i>Modification Item 1 of 1:</i> CJ030 - HW/SW Obsolescence	- / 2.079	- / 2.320	- / 2.511	- / 4.231	- / -	- / 4.231	- / 3.527	- / 12.354	- / 14.996	- / 15.876	- / 6.000	- / 63.894
<i>Subtotal: Installation</i>	- / 2.079	- / 2.320	- / 2.511	- / 4.231	- / -	- / 4.231	- / 3.527	- / 12.354	- / 14.996	- / 15.876	- / 6.000	- / 63.894

Total

Total Cost (Procurement + Support + Installation)	11.274	4.290	4.846	6.756	-	6.756	18.149	27.353	20.196	27.252	6.000	126.116
--	---------------	--------------	--------------	--------------	----------	--------------	---------------	---------------	---------------	---------------	--------------	----------------

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 1 / CJ030 - HW/SW Obsolescence

Modification Item 1 of 1: CJ030 - HW/SW Obsolescence

Manufacturer Information

Manufacturer Name: Various				Manufacturer Location: Various			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 8			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Apr 2015	Jan 2016	Feb 2017				
Delivery Dates	Dec 2015	Sep 2016	Oct 2017				

Installation Information

Method of Implementation: AIT:: Installation Name: HW/SW Obsolescence

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 2.079	26 / 2.320	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	42 / 4.399
FY 2015	- / -	- / -	12 / 2.511	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.511
FY 2016	- / -	- / -	- / -	9 / 3.504	- / -	9 / 3.504	- / -	- / -	- / -	- / -	- / -	9 / 3.504
FY 2017	- / -	- / -	- / -	- / 0.727	- / -	- / 0.727	8 / 2.082	- / -	- / -	- / -	- / -	8 / 2.809
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.445	16 / 10.157	- / -	- / -	- / -	16 / 11.602
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.197	25 / 14.555	- / -	- / -	25 / 16.752
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.441	8 / 14.545	- / -	8 / 14.986
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.331	6 / 6.000	6 / 7.331
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 2.079	26 / 2.320	12 / 2.511	9 / 4.231	- / -	9 / 4.231	8 / 3.527	16 / 12.354	25 / 14.996	8 / 15.876	6 / 6.000	126 / 63.894

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	13	8	5	3	4	5	-	2	6	1	-	3	-	4	1	-	8	3	5	5	-	14	6	3	-	2	3	6	126
Out	-	9	-	-	20	13	-	4	-	3	5	-	-	3	6	-	3	4	-	1	8	8	-	-	5	4	16	3	-	11	126

Footnotes:

(3) HW/SW Obsolescence (CJ030) includes funding for procurement and installation of equipment to correct critical obsolescence issues on LPD17 Class mission systems. Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single CNO Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized. In FY16, there are (16) total kits being procured for installation on (3) FY17 CNO Availabilities on LPD 17 (9 kits), LPD 18 (5 kits), LPD 20 (2 kits). In FY 17, there are (10) total kits being procured for installation on (3) FY 18 CNO Availabilities on LPD 19 (4 kits), LPD 22 (5 kits), and LPD 21 (1 kit). FY 2015 HW/SW Obsolescence was reduced \$2.540 million in support of higher department priorities. FY 2016 funding request reduced \$2M for HW/SW obsolescence excess installation funding.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 2 / CJ040 HM&E Electrical Modifications
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	2.244	4.628	-	4.628	2.797	1.842	1.600	0.300	1.496	14.907
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	2.244	4.628	-	4.628	2.797	1.842	1.600	0.300	1.496	14.907
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	2.244	4.628	-	4.628	2.797	1.842	1.600	0.300	1.496	14.907

(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:

[HM&E Electrical Upgrades] HME Modernization funding is provided to correct mission, safety and reliability, issues on electrical systems and ultimately resolve maintenance intensive system concerns. HM&E Electrical Modifications include:
SWAN UPS- Space Based UPS Reduction

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0946 / LPD Class Support Equipment **Modification Number / Title:** 2 / CJ040 HM&E Electrical Modifications

Models of Systems Affected: HM&E Electrical Modifications **Modification Type:** TBD **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: CJ040 HM&E Electrical Modifications</i>												
B Kits												
Recurring												
1.1.1) HM&E Electrical Upgrades - NonOrganic ⁽⁴⁾	- / -	- / -	3 / 2.244	3 / 3.750	- / -	3 / 3.750	1 / 1.847	1 / 1.492	1 / 1.250	- / -	1 / 0.748	10 / 11.331
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 2.244	- / 3.750	- / -	- / 3.750	- / 1.847	- / 1.492	- / 1.250	- / -	- / 0.748	- / 11.331
<i>Subtotal: CJ040 HM&E Electrical Modifications</i>	- / -	- / -	3 / 2.244	3 / 3.750	- / -	3 / 3.750	1 / 1.847	1 / 1.492	1 / 1.250	- / -	1 / 0.748	10 / 11.331
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 2.244	- / 3.750	- / -	- / 3.750	- / 1.847	- / 1.492	- / 1.250	- / -	- / 0.748	- / 11.331
Installation												
<i>Modification Item 1 of 1: CJ040 HM&E Electrical Modifications</i>												
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 0.878	- / -	- / 0.878	- / 0.950	- / 0.350	- / 0.350	- / 0.300	- / 0.748	- / 3.576
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	2.244	4.628	-	4.628	2.797	1.842	1.600	0.300	1.496	14.907

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 2 / CJ040 HM&E Electrical Modifications

Modification Item 1 of 1: CJ040 HM&E Electrical Modifications

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 8

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Nov 2015	Feb 2017				
Delivery Dates		Jul 2016	Oct 2017				

Installation Information

Method of Implementation: AIT:: Installation Name: HM&E Electrical Upgrades

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	3 / 0.803	- / -	3 / 0.803	- / -	- / -	- / -	- / -	- / -	3 / 0.803
FY 2017	- / -	- / -	- / -	- / 0.075	- / -	- / 0.075	3 / 0.900	- / -	- / -	- / -	- / -	3 / 0.975
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.050	1 / 0.300	- / -	- / -	- / -	1 / 0.350
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.050	1 / 0.300	- / -	- / -	1 / 0.350
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.050	1 / 0.300	- / -	1 / 0.350
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.748	1 / 0.748
Total	- / -	- / -	- / -	3 / 0.878	- / -	3 / 0.878	3 / 0.950	1 / 0.350	1 / 0.350	1 / 0.300	1 / 0.748	10 / 3.576

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	1	-	1	1	-	1	1	-	-	1	-	-	-	-	1	-	-	-	1	1	10
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	1	-	1	1	-	1	-	-	-	-	1	-	-	2	10

Footnotes:

(4) HM&E Electrical Modification (CJ040) includes funding for procurement and installation of equipment to upgrade shipboard electrical systems to a more sustainable, reliable configuration on LPD17 Class ships. Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single CNO Availability. In FY16, there are (3) total kits being procured for installation on (3) FY17 CNO Availabilities on LPD 17, (1 kit), LPD 18 (1 kit) and LPD 20 (1 kit). In FY 17, there are (3) total kits being procured for installation on (3) FY 18 CNO Availabilities on LPD 19 (1 kits) , LPD 22 (1 kits), and LPD 21 (1 kit).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment				Modification Number / Title: 3 / CJ050 - HM&E Survivability Modifications				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.120	0.736	0.092	-	-	-	2.429	1.627	2.826	1.526	-	9.356
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.120	0.736	0.092	-	-	-	2.429	1.627	2.826	1.526	-	9.356
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.120	0.736	0.092	-	-	-	2.429	1.627	2.826	1.526	-	9.356
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

*FY15 Procurements will not be installed in FY16 due to Congressional Marks.

[HM&E Survivability Modifications] HME Modernization funding is provided to correct mission, safety and reliability issues on HM&E systems (impacting ship survivability) and ultimately resolve maintenance intensive system concerns. HM&E Survivability Modifications include:
Smoke Ejection System (SES) Redesign
Composite Ventilation Louvers and Screens.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 3 / CJ050 - HM&E Survivability Modifications

Models of Systems Affected: HM&E Survivability Modifications	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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

<i>Modification Item 1 of 1:</i> CJ050 - HM&E Survivability Modifications												
B Kits												
Recurring												
1.1.1) HM&E Survivability Modifications - NonOrganic ⁽⁵⁾	1 / 0.088	2 / 0.736	- / -	- / -	- / -	- / -	2 / 1.924	3 / 0.918	4 / 1.775	- / -	- / -	12 / 5.441
<i>Subtotal: Recurring</i>	- / 0.088	- / 0.736	- / -	- / -	- / -	- / -	- / 1.924	- / 0.918	- / 1.775	- / -	- / -	- / 5.441
<i>Subtotal: CJ050 - HM&E Survivability Modifications</i>	1 / 0.088	2 / 0.736	- / -	- / -	- / -	- / -	2 / 1.924	3 / 0.918	4 / 1.775	- / -	- / -	12 / 5.441
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.088	- / 0.736	- / -	- / -	- / -	- / -	- / 1.924	- / 0.918	- / 1.775	- / -	- / -	- / 5.441

Installation

<i>Modification Item 1 of 1:</i> CJ050 - HM&E Survivability Modifications	- / 0.032	- / -	- / 0.092	- / -	- / -	- / -	- / 0.505	- / 0.709	- / 1.051	- / 1.526	- / -	- / 3.915
<i>Subtotal: Installation</i>	- / 0.032	- / -	- / 0.092	- / -	- / -	- / -	- / 0.505	- / 0.709	- / 1.051	- / 1.526	- / -	- / 3.915

Total

Total Cost (Procurement + Support + Installation)	0.120	0.736	0.092	-	-	-	2.429	1.627	2.826	1.526	-	9.356
--	--------------	--------------	--------------	----------	----------	----------	--------------	--------------	--------------	--------------	----------	--------------

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 3 / CJ050 - HM&E Survivability Modifications

Modification Item 1 of 1: CJ050 - HM&E Survivability Modifications

Manufacturer Information

Manufacturer Name: VARIOUS	Manufacturer Location: TBD
Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 8

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Apr 2015						
Delivery Dates	Dec 2015						

Installation Information

Method of Implementation: AIT:: Installation Name: HM&E Survivability Modifications

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	1 / 0.032
FY 2015	- / -	- / -	2 / 0.092	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.092
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.505	2 / 0.484	- / -	- / -	- / -	2 / 0.989
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.225	3 / 0.726	- / -	- / -	3 / 0.951
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.325	4 / 1.526	- / -	4 / 1.851
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.032	- / -	2 / 0.092	- / -	- / -	- / -	- / 0.505	2 / 0.709	3 / 1.051	4 / 1.526	- / -	12 / 3.915

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	1	1	-	1	-	1	1	-	-	1	3	-	12
Out	-	-	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	1	-	-	4	12

Footnotes:
⁽⁵⁾ HM&E Survivability Modifications (CJ050) includes funding for procurement and installation of equipment to support upgrades of shipboard survivability systems to a more sustainable, reliable configuration on LPD17 Class ships. Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single CNO Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment				Modification Number / Title: 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	5.379	23.063	19.902	12.401	-	12.401	16.946	32.844	37.100	35.864	11.869	195.368
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	5.379	23.063	19.902	12.401	-	12.401	16.946	32.844	37.100	35.864	11.869	195.368
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	5.379	23.063	19.902	12.401	-	12.401	16.946	32.844	37.100	35.864	11.869	195.368
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

HM&E Mechanical/Auxiliary Modifications(CJ060) includes funding for procurement and installation of equipment to support upgrades of shipboard mechanical/auxiliary systems to a more sustainable, reliable configuration on LPD17 Class ships. Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single CNO Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications

Models of Systems Affected: HM&E Mechanical/ Auxiliary Modifications	Modification Type: TBD	Related RDT&E PEs:
--	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> CJ060 - HM&E Mechanical/ Auxiliary Modifications												
B Kits												
Recurring												
1.1.1) CJ060 HM&E Mechanical/Auxiliary Modifications - NonOrganic ⁽⁶⁾	2 / 5.379	20 / 17.684	13 / 11.968	6 / 5.289	- / -	6 / 5.289	12 / 13.324	17 / 19.706	20 / 17.890	6 / 8.268	- / -	96 / 99.508
<i>Subtotal: Recurring</i>	- / 5.379	- / 17.684	- / 11.968	- / 5.289	- / -	- / 5.289	- / 13.324	- / 19.706	- / 17.890	- / 8.268	- / -	- / 99.508
<i>Subtotal: CJ060 - HM&E Mechanical/Auxiliary Modifications</i>	2 / 5.379	20 / 17.684	13 / 11.968	6 / 5.289	- / -	6 / 5.289	12 / 13.324	17 / 19.706	20 / 17.890	6 / 8.268	- / -	96 / 99.508
<i>Subtotal: Procurement, All Modification Items</i>	- / 5.379	- / 17.684	- / 11.968	- / 5.289	- / -	- / 5.289	- / 13.324	- / 19.706	- / 17.890	- / 8.268	- / -	- / 99.508
Installation												
<i>Modification Item 1 of 1:</i> CJ060 - HM&E Mechanical/ Auxiliary Modifications	- / 0.000	- / 5.379	- / 17.934	- / 17.112	- / -	- / 17.112	- / 3.622	- / 13.138	- / 19.210	- / 27.596	- / 11.869	- / 95.860
<i>Subtotal: Installation</i>	- / 0.000	- / 5.379	- / 17.934	- / 17.112	- / -	- / 17.112	- / 3.622	- / 13.138	- / 19.210	- / 27.596	- / 11.869	- / 95.860
Total												
Total Cost (Procurement + Support + Installation)	5.379	23.063	19.902	12.401	-	12.401	16.946	32.844	37.100	35.864	11.869	195.368

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications

Modification Item 1 of 1: CJ060 - HM&E Mechanical/Auxiliary Modifications

Manufacturer Information							
Manufacturer Name: Various				Manufacturer Location: Various			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 9			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Nov 2014	Jan 2016	Jan 2017				
Delivery Dates	Aug 2015	Oct 2016	Oct 2017				

Installation Information

Method of Implementation: [none specified]:: Installation Name: CJ060 HM&E Mechanical/Auxiliary Modifications

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 5.379	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / 5.379
FY 2015	- / -	- / -	20 / 7.934	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 7.934
FY 2016	- / -	- / -	- / -	13 / 5.967	- / -	13 / 5.967	- / -	- / -	- / -	- / -	- / -	13 / 5.967
FY 2017	- / -	- / -	- / -	- / 1.145	- / -	- / 1.145	6 / 2.794	- / -	- / -	- / -	- / -	6 / 3.939
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.828	12 / 12.377	- / -	- / -	- / -	12 / 13.205
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.761	17 / 16.447	- / -	- / -	17 / 17.208
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.763	20 / 25.140	- / -	20 / 27.903
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.456	6 / 11.869	6 / 14.325
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / 5.379	20 / 7.934	13 / 7.112	- / -	13 / 7.112	6 / 3.622	12 / 13.138	17 / 19.210	20 / 27.596	6 / 11.869	96 / 95.860

Installation Schedule																															
	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	14	-	6	6	4	1	2	3	-	2	1	-	5	2	5	6	-	5	6	6	-	5	9	6	96
Out	-	-	-	-	-	2	-	14	-	6	-	-	-	9	4	-	-	5	-	2	5	-	6	6	-	4	7	6	-	20	96

Footnotes:

⁽⁶⁾ HM&E Mechanical/Auxiliary Modifications(CJ060) includes funding for procurement and installation of equipment to support upgrades of shipboard mechanical/auxiliary systems to a more sustainable, reliable configuration on LPD17 Class ships. Shipsets of equipment vary in quantities and types of components each fiscal year and within a fiscal year. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. A quantity of "1" represents a single "kit" intended for installation in one ship, in a single CNO Availability. Ships may be receiving more than 1 kit in a single availability based upon the fielding plan for the systems being modernized. IN FY16, there are (13) total kits being procured for installation on (4) FY17 CNO Availabilities

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 4 / CJ060 - HM&E Mechanical/Auxiliary Modifications

on LPD 17 (4 kits), LPD 18 (6 kits), LPD 20 (2 kits), LPD26 (1 kit). In FY 17, there are (6) total kits being procured for installation on (3) FY 18 CNO Availabilities on LPD 19 (3 kits) , LPD 22 (1 kit), and LPD 21 (2 kits).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 5 / CJ070 SWAN-CANES Integration
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	10.100	4.390	13.546	16.536	-	16.536	12.593	9.296	10.030	8.254	-	84.745
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	10.100	4.390	13.546	16.536	-	16.536	12.593	9.296	10.030	8.254	-	84.745
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	10.100	4.390	13.546	16.536	-	16.536	12.593	9.296	10.030	8.254	-	84.745

(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:

[SWAN-CANES Integration] The results of the Shipboard Wide Area Network (SWAN) / Consolidated Afloat Networks and Enterprise Services (CANES) study directed the replacement of the C4I capability of the LPD 17 Class SWAN with CANES and the conversion of the non-C4I SWAN into a new HM&E Network (mini SWAN). SWAN funding is required to field the new HM&E Network in support of the CANES installation. In addition, funding is required to sustain the legacy SWAN, while the LPD 17 Class ships await the CANES/HM&E Network back fit installation. SWAN serves as the backbone of the LPD 17 class and funding is necessary to address obsolescence, reliability issues, performance concerns, emergent Fleet requirements including enabling Cryptologic Log On (CLO), eradicating Windows XP, replacing aging obsolete network hardware (e.g., servers and core switches), and maintaining the Information Assurance posture of the Common Operating Environment (COE). This funding is vital to ensure the LPD 17 Class ships can combat the evolving cyber threat.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment					Modification Number / Title: 5 / CJ070 SWAN-CANES Integration			
Models of Systems Affected: LPD 17 Class SWAN-CANES Integration					Modification Type: TBD					Related RDT&E PEs:			
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: CJ070 SWAN-CANES Integration</i>													
B Kits													
Recurring													
1.1.1 SWAN-CANES Integration - NonOrganic ⁽⁷⁾	23 / 2.865	20 / 2.204	16 / 9.180	29 / 10.182	- / -	29 / 10.182	10 / 9.683	3 / 4.525	3 / 8.542	- / 1.891	- / -	104 / 49.072	
<i>Subtotal: Recurring</i>	- / 2.865	- / 2.204	- / 9.180	- / 10.182	- / -	- / 10.182	- / 9.683	- / 4.525	- / 8.542	- / 1.891	- / -	- / 49.072	
Non-Recurring													
1.2.1 SWAN-CANES Integration - Organic ⁽⁸⁾	- / 4.235	- / 0.200	- / 1.200	- / 1.250	- / -	- / 1.250	- / -	- / -	- / -	- / -	- / -	- / 6.885	
<i>Subtotal: Non-Recurring</i>	- / 4.235	- / 0.200	- / 1.200	- / 1.250	- / -	- / 1.250	- / -	- / -	- / -	- / -	- / -	- / 6.885	
<i>Subtotal: CJ070 SWAN-CANES Integration</i>	23 / 7.100	20 / 2.404	16 / 10.380	29 / 11.432	- / -	29 / 11.432	10 / 9.683	3 / 4.525	3 / 8.542	- / 1.891	- / -	104 / 55.957	
<i>Subtotal: Procurement, All Modification Items</i>	- / 7.100	- / 2.404	- / 10.380	- / 11.432	- / -	- / 11.432	- / 9.683	- / 4.525	- / 8.542	- / 1.891	- / -	- / 55.957	
Installation													
<i>Modification Item 1 of 1: CJ070 SWAN-CANES Integration</i>													
	- / 3.000	- / 1.986	- / 3.166	- / 5.104	- / -	- / 5.104	- / 2.910	- / 4.771	- / 1.488	- / 6.363	- / -	- / 28.788	
<i>Subtotal: Installation</i>	- / 3.000	- / 1.986	- / 3.166	- / 5.104	- / -	- / 5.104	- / 2.910	- / 4.771	- / 1.488	- / 6.363	- / -	- / 28.788	
Total													
Total Cost (Procurement + Support + Installation)	10.100	4.390	13.546	16.536	-	16.536	12.593	9.296	10.030	8.254	-	84.745	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 5 / CJ070 SWAN-CANES Integration

Modification Item 1 of 1: CJ070 SWAN-CANES Integration

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: San Diego, CA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 7

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Apr 2015	Dec 2015	Dec 2016				
Delivery Dates	Nov 2015	Jul 2016	Jul 2017				

Installation Information

Method of Implementation: AIT:: Installation Name: SWAN-CANES Integration

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	8 / 3.000	15 / 1.986	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	23 / 4.986
FY 2015	- / -	- / -	20 / 3.166	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 3.166
FY 2016	- / -	- / -	- / -	16 / 5.104	- / -	16 / 5.104	- / -	- / -	- / -	- / -	- / -	16 / 5.104
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	29 / 2.910	- / -	- / -	- / -	- / -	29 / 2.910
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 4.771	- / -	- / -	- / -	10 / 4.771
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.488	- / -	- / -	3 / 1.488
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 6.363	- / -	3 / 6.363
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	8 / 3.000	15 / 1.986	20 / 3.166	16 / 5.104	- / -	16 / 5.104	29 / 2.910	10 / 4.771	3 / 1.488	3 / 6.363	- / -	104 / 28.788

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	8	1	3	5	6	7	7	-	6	1	1	3	11	1	-	19	9	-	1	1	8	-	-	2	1	-	-	1	2	-	104
Out	8	-	-	4	7	4	-	-	7	8	7	-	3	5	-	6	1	9	13	6	1	9	-	-	-	2	1	-	-	3	104

Footnotes:

(7) This mod has sharp fluctuations in procurement and installation unit cost due to the variations in equipment quantities and types of components that make up a shipset. Each ship requires a different number of alterations to be installed, and these alteration packages vary in scope and cost based on individual ship configurations. Due to TYCOM Integrated Class Maintenance Plan(ICMP) scheduling adjustments, CNO availabilities for LPD 17 Class have increased from once every 2 years to once every 3 years. This has caused CANES and HM&E Network schedules to slip and SWAN sustainment modification quantities to increase.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0946 / LPD Class Support Equipment	Modification Number / Title: 5 / CJ070 SWAN-CANES Integration

⁽⁸⁾ FY16 Availabilities: LPD 21 - SWAN Server(Dell)/COMPOSE 4.0; SWAN COMPOSE 4.0; Network Router Upgrade; Network Storage Device Upgrade; SWAN Adaptation Updates; SWAN Transport Upgrades; SIPRNET CLO COMPOSE 4.0. LPD 23 - SWAN Mesh CORE Switch; SWAN COMPOSE 4.0; Network Router Upgrade; Network Storage Device Upgrade; SWAN Adaptation Updates; SWAN Transport Upgrades; SIPRNET CLO COMPOSE 4.0. LPD 24 - SWAN Mesh CORE Switch; Network Router Upgrade; SWAN Adaptation Updates; SWAN Transport Upgrades; Acatel O/S Upgrade; SIPRNET CLO COMPOSE 4.0. FY17 Availabilities: LPD 17 - HM&E Conversion Mesh. LPD 18 - HM&E Conversion Mesh. LPD 20 - SWAN COMPOSE 4.0; Network Router Upgrade; Network Storage Device Upgrade; SWAN Adaptation Updates; SWAN Transport Upgrades. LPD 25 - SWAN Mesh CORE Switch; SWAN COMPOSE 4.0; Network Router Upgrade; Network Storage Device Upgrade; SWAN Adaptation Updates; SWAN Transport Upgrades. LPD 26 - SWAN Adaptation Updates; SWAN Transport Upgrades; SIPRNET CLO COMPOSE 4.0.

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0947 / DDG 1000 Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0204202N **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 197 **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	33.404	-	33.404	33.278	2.192	2.265	2.308	-	73.447
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	33.404	-	33.404	33.278	2.192	2.265	2.308	-	73.447
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	33.404	-	33.404	33.278	2.192	2.265	2.308	-	73.447

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DDG 1000, a multi-mission surface combatant, will serve as a versatile asset in the context of future Naval Strategy. Armed with an array of weapons, DDG 1000 will provide the Joint Force Commander with precision strike and volume fires. Designed with sustainable payload, multi-spectral stealth and optimal manning, DDG 1000 will take the fight to the enemy with unprecedented striking power.

Program provides for DDG 1000 combat system hardware/equipment suite technology refresh to support obsolescence management and address reliability, maintainability & availability (RM&A) issues following fielding. Combat

System hardware will be approaching 10 years of age at time of delivery for DDG 1000 and 1001. Active management of Commercial Off The Shelf (COTS) obsolescence via hardware/equipment technology refresh will be required

to ensure DDG 1000 class ships reach their design service life. Additionally, program will sustain and upgrade in-service DDG 1000 ships in order to achieve their Expected Service Life (ESL). Upgrades will be mission capable in

countering current and projected threats, improve operational capabilities, and comply with requirements.

[P40A / DDG 1000 DATA CENTER]: Funding provides for the procurement and installation of critical technology refresh of the technical baseline for the first DDG 1000 data center (2 per ship) to enable the DDG 1000 combat system to operate with two (2) fully populated data centers (computer rooms). Technology refresh includes identification and qualification of applicable obsolete DDG 1000 data center parts, technical drawing updates (Lowest Replaceable Unit (LRU) & cabinet level), and Integrated Logistics Support (ILS) updates (LRU & cabinet level). Two (2) fully populated data centers on DDG 1000 enable shipboard integrated training, support Overall Combat System Operability Test (OCSOT) implementation, support Integrated Ship Plan (ISP) validation, and provide system redundancy in the event of operational casualty. Without a supportable ISP, the ship will be unable to validate the operation and safety of the ship's systems. DDG 1000 data centers house the Total Ship Computing Environment (TSCE); a single, secure network that includes all shipboard computing applications, from Command, Control, Communications, Computers (C4), and intelligence equipment to Combat Management Systems (CMSs) to machinery control and embedded training, support, and damage control systems.

[P40A / DDG 1001 DATA CENTER]: Funding provides for the procurement and installation of critical technology refresh of the technical baseline for the first DDG 1001 data center (2 per ship) to enable the DDG 1000 combat system to operate with two (2) fully populated data centers (computer rooms). Technology refresh includes identification and qualification of applicable obsolete DDG 1000 data center parts, technical drawing updates (Lowest Replaceable Unit (LRU) & cabinet level), and Integrated Logistics Support (ILS) updates (LRU & cabinet level). Two (2) fully populated data centers on DDG 1000 enable shipboard integrated training, support Overall Combat System Operability Test (OCSOT) implementation, support Integrated Ship Plan (ISP) validation, and provide system redundancy in the event of operational casualty. Without a supportable ISP, the ship will be unable to validate the operation and safety of the ship's systems. DDG 1000 data centers house the Total Ship Computing Environment (TSCE); a single,

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0947 / DDG 1000 Class Support Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204202N	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 197	Item MDAP/MAIS Code(s): N/A	
<p>secure network that includes all shipboard computing applications, from Command, Control, Communications, Computers (C4), and intelligence equipment to Combat Management Systems (CMSs) to machinery control and embedded training, support, and damage control systems.</p> <p>[P40A / DDG 1000 CLASS PRODUCT IMPROVEMENT]: Funding will support ship alteration (Shipalt) prioritization and planning through shipyard installations during availabilities. Other modernization efforts include but are not limited to logistics and technical documentation, engineering services and Alteration Installation Team (AITs) within the Fleet Modernization Program (FMP). FY2017 funding will procure DDG 1000 Total Ship Computing Environment (TSCE) network switches which are critical items required to support DDG 1000 Data Center technology refresh. These TSCE network switches support Integrated Ship Plan (ISP) validation, address obsolescence, and require configuration engineering prior to installation. Without a supportable ISP, the ship will be unable to validate the operation and safety of the ship s systems.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0947 / DDG 1000 Class Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0204202N **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 197 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	DDG 1000 Class Support Equipment	P-5a, P-21		- / 0.000	- / -	- / -	- / 33.404	- / -	- / 33.404
P-40	Total Gross/Weapon System Cost			- / 0.000	- / -	- / -	- / 33.404	- / -	- / 33.404

*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.

Justification:
FY2017 funding provides for the procurement and installation of critical technology refresh of the technical baseline for the first DDG 1000 data center (2 per ship) to enable the DDG 1000 combat system to operate with two (2) fully populated data centers (computer rooms). Existing DDG 1000 data center hardware will be approaching 10 years of age at time of delivery. Technology refresh includes non-recurring engineering required to identify and qualify applicable obsolete DDG 1000 data center parts, prepare drawing updates (Lowest Replaceable Unit (LRU) & cabinet level), and prepare Integrated Logistics Support (ILS) updates (LRU & cabinet level).

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment **Aggregated Items Title:** DDG 1000 Class Support Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) DDG 1000 Class Support Equipment																				
1.1) DDG 1000 DATA CENTER ^(t)	A		-	-	-	-	-	-	-	-	30,600K	1	30.600	-	-	-	30,600K	1	30.600	
Subtotal: 1) DDG 1000 Class Support Equipment			-	-	0.000	-	-	-	-	-	-	-	30.600	-	-	-	-	-	30.600	
2) DDG 1000 CLASS SUPPORT																				
2.1) DDG 1000 PRODUCTION ENGINEERING	A		-	-	-	-	-	-	-	-	-	-	1.400	-	-	-	-	-	1.400	
Subtotal: 2) DDG 1000 CLASS SUPPORT			-	-	0.000	-	-	-	-	-	-	-	1.400	-	-	-	-	-	1.400	
3) DDG 1000 CLASS HM&E PRODUCT IMPROVEMENT																				
3.1) DDG 1000 CLASS PRODUCT IMPROVEMENT	A		-	-	-	-	-	-	-	-	-	-	1.404	-	-	-	-	-	1.404	
Subtotal: 3) DDG 1000 CLASS HM&E PRODUCT IMPROVEMENT			-	-	0.000	-	-	-	-	-	-	-	1.404	-	-	-	-	-	1.404	
Total			-	-	0.000	-	-	-	-	-	-	-	33.404	-	-	-	-	-	33.404	

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0947 / DDG 1000 Class Support Equipment	Aggregated Items: DDG 1000 Class Support Equipment
---	---	--

Item Number / Title [DODIC]	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) DDG 1000 Class Support Equipment												
1.1) DDG 1000 DATA CENTER ^(†)		2017	Raytheon / Portsmouth, RI	SS / FP	NAVSEA	Mar 2017	Sep 2018	1	30,600K	N	Feb 2016	Mar 2016

^(†) indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0947 / DDG 1000 Class Support Equipment **Aggregated Items:** DDG 1000 Class Support Equipment

Items <i>(Units in Each)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE	
O C C #	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
1) DDG 1000 Class Support Equipment																															
1.1) DDG 1000 DATA CENTER																															
19		2017	NAVY	1	-	1																									
							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 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0947 / DDG 1000 Class Support Equipment				Aggregated Items: DDG 1000 Class Support Equipment				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	Raytheon - Portsmouth, RI	-	-	-	-	-	18	18	-	-	18	18

"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).

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0950 / Strategic Platform Support Equip

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	104.215	11.558	18.563	15.836	-	15.836	15.747	14.367	9.834	10.039	19.512	219.671
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	104.215	11.558	18.563	15.836	-	15.836	15.747	14.367	9.834	10.039	19.512	219.671
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	104.215	11.558	18.563	15.836	-	15.836	15.747	14.367	9.834	10.039	19.512	219.671

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2017 funding request was reduced by \$1.281M to account for the availability of prior years execution balance.

Funding in this P-1 line provides for the procurement of tactical Hull, Mechanical and Electrical (HM&E) equipment that will be installed aboard ships and in the facilities at the TRIDENT Refit Facility (TRIREFFAC), Navy Intermediate Maintenance Facility (NAVIMFAC) and TRIDENT Training Facility (TRITRAFAC). The TRIDENT Refit Facility and Navy Intermediate Maintenance Facility (NAVIMFAC) are dedicated shore support facilities providing a full range of industrial support. The TRITRAFAC provides the crews for the SSBN 726 Class Submarines with realistic training experience in operating and maintaining shipboard equipment.

[P40A / HH009 EQUIPMENT HM&E & SWS/SS ALTERATION]: This provides for the replacement of obsolete equipment on board of SSBN 726 Class Submarines and at dedicated Shore Support Facilities (TLCSF, TRITRAFAC (B), NAVIMFAC (B), TRITRAFAC (KB), TRIREFFAC (KB), Major Shore Spares (MSS)). These alterations are necessary in order to replace obsolete/outdated equipment with new equipment to maintain or increase mission capabilities, replace or modify components/systems which have proven to be unreliable, correct design and safety problems and reduce fleet maintenance burdens. Funds provide for multiple efforts to ensure that the OHIO Class Ship Control Subsystem, both hardware and software components, support the extended life of the OHIO Class submarine platforms. In FY99 and again in FY06 a NUWC KEYPORT study identified a number of obsolete electronic components in the Ship Control Station (27 out of 107) that are no longer available. The FY06 study recommended that the Ship Control ISEA develop and execute a program that would address the near term obsolescence issues and ensure the continued availability of the subsystem in the out years. Alterations and actions are done at the lowest practicable and authorized level (taking into consideration urgency, priority, capability, capacity and cost). Alterations to SSBN 726 Class Submarines are scheduled for accomplishment at the TRIREFFAC, Kings Bay and NAVIMFAC, Bangor. This requires equipment procurement and installation, technical planning, training, and associated resources. This line provides for material procurement necessary to install the required alterations to SSBN 726 Class Submarines at the NAVIMFAC, Bangor, and the TRIREFFAC, Kings Bay. Additionally, this line provides for the utilization of specially trained and dedicated installation teams to ensure accelerated and correct installation of complex and high priority alterations within specific time frames. Provided are comprehensive program management and execution, including planning, direction, control, installation, integration, and coordination of specifically selected safety related, mission enhancement or technical HM&E alterations. Starting in FY12, SSBN SWSS OER Upgrades are planned for Ventilation Alarm Monitoring Panel (VAMP) and the Missile Heating and Cooling Proportional Controllers. Both upgrades are required to support Strategic Programs' SWS Integration program (Mod6/Mod7) which replaces the current Launcher, Fire Control and Weapons Support electronics. Starting in FY16, two SSBN/GN OER transducer upgrade programs are planned, one for Hovering Transducers and the second for MDD/MHC Differential Pressure Transducers. Both transducer types are estimated to be out of spares by 2018 and will require form/fit/function replacement. The Hovering System on both SSBNs and SSGNs is experiencing obsolescence issues due to aging technology and terminated vendor component production as of 2000. The Missile Drying and Dehumidification (MDD) system and Missile Heating and Cooling (MHC) system on both SSBNs and SSGNs provides a stable temperature and humidity environment for the missile tubes, and has similar obsolescence issues, with terminated vendor component production as of 2009. The Ships Hovering System is experiencing obsolescence issues due to aging technology and terminated vendor component production in 2000. The MDD/

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>MHC Differential Pressure Transducers for the Ship's Missile Drying and Dehumidification (MDD) system and Missile Heating and Cooling (MHC) system are utilized onboard the OHIO Class to provide a stable humidity environment for D5 missiles.</p> <p>[P40A / HH012 EQUIPMENT HM&E TRIDENT ENGINEERING AVAILABILITY]: TRIDENT Engineered Availability (EA) material support funding is required to provide replacement and contingency material to support the critical path schedule during the SSBN 726 Class Submarine Engineered Availabilities (EAs) commencing in FY93 and continuing through the operational life of the submarine. Funding is also required to formulate or procure complex tools and fixtures required to reduce EA scheduled durations. This program also provides funding for installation of Depot level alterations packages, Quality Assurance (QA) oversight and certification by Supervisor Of Shipbuilding, Groton (SOS Groton) of OPN shipalts performed by Electric Boat Corporation (EB), Liaison Action Requests and Selected Record Drawings (LAR/ SRD) mark ups for Shipalt related work, NUWC Newport test support and deck plate coordination of Alteration Installation Team (AIT) work for Extended Refit Periods (ERPs)/ modernization periods.</p> <p>[P40A / HH0GN SSGN MODIFICATIONS]: Provides for procurement of SSGN unique system components that will be installed during planned modernization periods. Also provides funding to perform integrated testing of these unique systems to ensure satisfactory operation with other HM&E and Combat Systems. Beginning in FY11, funds are provided for procurement of Submarine Special Operations Forces (SOF) unique system components that will be installed during planned modernization periods.</p> <p>[P40A / SOF HH0GN]: Additionally beginning in FY11, funds are provided for installation of Submarine Special Operations Forces (SOF) unique system components. Starting in FY12, installation of SSBN SWSS OER upgrades are planned for Ventilation Alarm Monitoring Panel (VAMP) and Missile Heating and Cooling Proportional Controllers. Starting in FY14, installation of SSBN/SSGN Ship Control Station (SCS) OER upgrades.</p> <p>[P3A - 3 / SSTG ROTORS OHIO CLASS PROCUREMENT]: Provides for the procurement of material and manufacturing of Ships Service Turbine Generator (SSTG) Rotors on OHIO Class submarines. This cost code was established for FY10. This is due to shifting Engineered Refueling Overhauls (EROs) beginning in FY10 from SCN funding to O&MN, OPN, and WPN funding. This rotor effort used to be in the SSBN ERO SCN line and the transferred funding for this effort is OPN. Replaces both SSTG rotors (port and starboard). Rotor retaining rings and insufficient life of critical rotor internal components such as radial conductors, J-straps, rotor body tooth tops, and rotor winding transition area are primary liabilities limiting rotor set operational life. The older rotor design utilized retaining rings that are subject to stress, corrosion, and cracking when exposed to moisture. This stress corrosion and cracking could result in catastrophic failure resulting in personnel and ship safety concerns. Starting in FY12, the last procurement, a Major Shore Spare (MSS), is procured with no installation required.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0950 / Strategic Platform Support Equip

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Strategic Platform Support Equip	P-5a		- / 72.601	- / 7.701	- / 8.245	- / 6.456	- / -	- / 6.456
P-3a	1 / EQUIPMENT HM&E SWS/SS ALTERATION SSBN SWSS OER UPGRADE (TBD)			- / 4.550	- / 0.941	- / 3.000	- / 2.000	- / -	- / 2.000
P-3a	2 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC (TBD)			- / 4.098	- / 2.916	- / 7.318	- / 7.380	- / -	- / 7.380
P-3a	3 / SSTG ROTORS OHIO CLASS PROCUREMENT (TBD)			- / 22.966	- / -	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 104.215	- / 11.558	- / 18.563	- / 15.836	- / -	- / 15.836

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Strategic Platform Support Equip	P-5a		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / EQUIPMENT HM&E SWS/SS ALTERATION SSBN SWSS OER UPGRADE (TBD)			- / -	- / -	- / -	- / -	- / -	- / 10.491
P-3a	2 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC (TBD)			- / 5.228	- / 6.822	- / 2.821	- / 2.638	- / 18.830	- / 58.051
P-3a	3 / SSTG ROTORS OHIO CLASS PROCUREMENT (TBD)			- / -	- / -	- / -	- / -	- / -	- / 22.966
P-40	Total Gross/Weapon System Cost			- / 15.747	- / 14.367	- / 9.834	- / 10.039	- / 19.512	- / 219.671

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy																Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9						P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip						Aggregated Items Title: Strategic Platform Support Equip								
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) HH009 EQUIPMENT HM&E & SWS/SS ALTERATION ⁽¹⁾																				
1.1) SCS PY SHIPALT DEV	A		-	-	30.553	-	-	3.716	-	-	1.434	-	-	1.568	-	-	-	-	-	1.568
1.2) SWSS SSBN/SSGN Hovering System DP Transducers	A		-	-	-	-	-	-	-	-	1.000	-	-	0.680	-	-	-	-	-	0.680
1.3) SWSS MDD/MHC Differential Pressure Transducers	A		-	-	-	-	-	-	-	-	1.000	-	-	0.800	-	-	-	-	-	0.800
1.4) Ship Control Station OER Material ⁽²⁾	A		-	-	-	-	-	-	-	-	0.860	-	-	0.657	-	-	-	-	-	0.657
Subtotal: 1) HH009 EQUIPMENT HM&E & SWS/SS ALTERATION			-	-	30.553	-	-	3.716	-	-	4.294	-	-	3.705	-	-	-	-	-	3.705
2) HH012 EQUIPMENT HM&E TRIDENT ENGINEERING AVAILABILITY																				
2.1) SHIPALT INSTALLATION AND ENGINEERING SERVICES ⁽¹⁾	A		3,549K	4	14.197	1,335K	1	1.335	1,242K	1	1.242	805,000.00	1	0.805	-	-	-	805,000.00	1	0.805
2.2) CCS EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING ⁽¹⁾	A		3,017K	4	12.068	1,081K	1	1.081	1,107K	1	1.107	651,000.00	1	0.651	-	-	-	651,000.00	1	0.651
2.3) HM&E EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING ⁽¹⁾	A		1,926K	4	7.705	763,000.00	1	0.763	782,000.00	1	0.782	460,000.00	1	0.460	-	-	-	460,000.00	1	0.460
Subtotal: 2) HH012 EQUIPMENT HM&E TRIDENT ENGINEERING AVAILABILITY			-	-	33.970	-	-	3.179	-	-	3.131	-	-	1.916	-	-	-	-	-	1.916
3) HH0GN SSGN MODIFICATIONS																				
3.1) SOF UPGRADES	A		-	-	2.185	-	-	0.587	-	-	0.528	-	-	0.538	-	-	-	-	-	0.538
Subtotal: 3) HH0GN SSGN MODIFICATIONS			-	-	2.185	-	-	0.587	-	-	0.528	-	-	0.538	-	-	-	-	-	0.538
4) SOF HH0GN ⁽³⁾																				
4.1) SOF ALTS	A		-	-	2.255	-	-	0.219	-	-	0.292	-	-	0.297	-	-	-	-	-	0.297
Subtotal: 4) SOF HH0GN			-	-	2.255	-	-	0.219	-	-	0.292	-	-	0.297	-	-	-	-	-	0.297
5) HH013 SSTG Rotor MSS ⁽⁴⁾																				
5.1) OHIO CLASS PROCUREMENT MSS ⁽¹⁾	A		3,638K	1	3.638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0950 / Strategic Platform Support Equip **Aggregated Items Title:** Strategic Platform Support Equip

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) HH013 SSTG Rotor MSS			-	-	3.638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total			-	-	72.601	-	-	7.701	-	-	8.245	-	-	6.456	-	-	-	-	6.456	

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) Starting in FY16, two SSBN/GN OER transducer upgrade programs are planned, one for Hovering Transducers and the second for MDD/MHC Differential Pressure Transducers. Both transducer types are estimated to be out of spares by 2018 and will require form/fit/function replacement. The Hovering System on both SSBNs and SSGNs is experiencing obsolescence issues due to aging technology and terminated vendor component production as of 2000. The Missile Drying and Dehumidification (MDD) system and Missile Heating and Cooling (MHC) system on both SSBNs and SSGNs provides a stable temperature and humidity environment for the missile tubes, and has similar obsolescence issues, with terminated vendor component production as of 2009.
- (2) Ship Control Station OER Material funds identified are for ancillary material required to set up for and support installations. Starting in FY16, these funds are moved from installation to procurement and shown as separate line items to better reflect the required funding profile.
- (3) Beginning in FY11, funds are provided for installation of Submarine Special Operations Forces (SOF) unique system components.
- (4) Provides for the installation of SSTG Rotors on the OHIO Class Submarines, FY12-13.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip	Aggregated Items: Strategic Platform Support 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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2) HH012 EQUIPMENT HM&E TRIDENT ENGINEERING AVAILABILITY												
2.1) SHIPALT INSTALLATION AND ENGINEERING SERVICES		2011	ELECTRIC BOAT / NEW LONDON	C / CPFF	NAVSEA	Apr 2011	Aug 2011	1	1,997K	Y		
2.1) SHIPALT INSTALLATION AND ENGINEERING SERVICES		2012	ELECTRIC BOAT / NEW LONDON	C / CPFF	NAVSEA	Apr 2012	Aug 2012	1	2,035K	Y		
2.1) SHIPALT INSTALLATION AND ENGINEERING SERVICES		2013	ELECTRIC BOAT / NEW LONDON	C / CPFF	NAVSEA	Apr 2013	Aug 2013	1	1,354K	Y		
2.1) SHIPALT INSTALLATION AND ENGINEERING SERVICES		2014	ELECTRIC BOAT / NEW LONDON	C / CPFF	NAVSEA	Apr 2014	Aug 2014	1	1,581K	Y		
2.1) SHIPALT INSTALLATION AND ENGINEERING SERVICES		2015	ELECTRIC BOAT / NEW LONDON	C / CPFF	NAVSEA	Apr 2015	Aug 2015	1	1,335K	N		
2.1) SHIPALT INSTALLATION AND ENGINEERING SERVICES		2016	ELECTRIC BOAT / NEW LONDON	C / CPFF	NAVSEA	Apr 2016	Aug 2016	1	1,242K	N		
2.1) SHIPALT INSTALLATION AND ENGINEERING SERVICES		2017	ELECTRIC BOAT / NEW LONDON	C / CPFF	NAVSEA	Apr 2017	Aug 2017	1	805,000.00	N		
2.2) CCS EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2011	NUWC Newport / RI	Various	NAVSEA	Apr 2011	Aug 2011	1	1,620K	Y		
2.2) CCS EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2012	NUWC Newport / RI	Various	NAVSEA	Apr 2012	Aug 2012	1	1,648K	Y		
2.2) CCS EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2013	NUWC Newport / RI	Various	NAVSEA	Apr 2013	Aug 2013	1	1,096K	Y		
2.2) CCS EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2014	NUWC Newport / RI	Various	NAVSEA	Apr 2014	Aug 2014	1	1,279K	Y		
2.2) CCS EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2015	NUWC Newport / RI	Various	NAVSEA	Apr 2015	Aug 2015	1	1,081K	N		
2.2) CCS EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2016	NUWC Newport / RI	Various	NAVSEA	Apr 2016	Aug 2016	1	1,107K	N		
2.2) CCS EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2017	NUWC Newport / RI	Various	NAVSEA	Apr 2017	Aug 2017	1	651,000.00	N		
2.3) HM&E EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2011	NSWC/CD / PHILADELPHIA, PA	Various	NAVSEA	Apr 2011	Aug 2011	1	1,134K	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9			P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip					Aggregated Items: Strategic Platform Support 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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.3) HM&E EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2012	NSWC/CD / PHILADELPHIA, PA	Various	NAVSEA	Apr 2012	Aug 2012	1	1,163K	Y		
2.3) HM&E EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2013	NSWC/CD / PHILADELPHIA, PA	Various	NAVSEA	Apr 2013	Aug 2013	1	774,000.00	Y		
2.3) HM&E EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2014	NSWC/CD / PHILADELPHIA, PA	Various	NAVSEA	Apr 2014	Aug 2014	1	903,000.00	Y		
2.3) HM&E EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2015	NSWC/CD / PHILADELPHIA, PA	Various	NAVSEA	Apr 2015	Aug 2015	1	763,000.00	N		
2.3) HM&E EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2016	NSWC/CD / PHILADELPHIA, PA	Various	NAVSEA	Apr 2016	Aug 2016	1	782,000.00	N		
2.3) HM&E EQUIPMENT REFURBISHMENT & SHIPBOARD TESTING		2017	NSWC/CD / PHILADELPHIA, PA	Various	NAVSEA	Apr 2017	Aug 2017	1	460,000.00	N		
5) HH013 SSTG Rotor MSS												
5.1) OHIO CLASS PROCUREMENT MSS		2012	ELECTRIC BOAT / NEW LONDON	C / CPFF	NAVSEA	Apr 2012	Apr 2014	1	3,638K	Y		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip				Modification Number / Title: 1 / EQUIPMENT HM&E SWS/SS ALTERATION SSBN SWSS OER UPGRADE				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4.550	0.941	3.000	2.000	-	2.000	-	-	-	-	-	10.491
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4.550	0.941	3.000	2.000	-	2.000	-	-	-	-	-	10.491
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4.550	0.941	3.000	2.000	-	2.000	-	-	-	-	-	10.491
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Strategic Weapons System Support Systems (SWSS) OER issues involving the Ventilation Alarm and Monitoring Panel (VAMP) and the Missile Heating and Cooling Proportional Controllers. Both upgrades are required to support Strategic Programs' SWS Integration program (Mod6/Mod7) which replaces the current Launcher, Fire Control and Weapons Support electronics.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip					Modification Number / Title: 1 / EQUIPMENT HM&E SWS/SS ALTERATION SSBN SWSS OER UPGRADE			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: EQUIPMENT HM&E SWS/SS ALTERATION SSBN SWSS OER UPGRADE</i>													
B Kits													
Recurring													
1.1.1) EQUIPMENT HM&E & SWS/SS ALTERATION SSBN SWSS OER UPGRADE - NonOrganic	8 / 2.500	2 / 0.500	6 / 1.500	4 / 1.000	- / -	4 / 1.000	- / -	- / -	- / -	- / -	- / -	20 / 5.500	
<i>Subtotal: Recurring</i>	<i>- / 2.500</i>	<i>- / 0.500</i>	<i>- / 1.500</i>	<i>- / 1.000</i>	<i>- / -</i>	<i>- / 1.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 5.500</i>	
<i>Subtotal: EQUIPMENT HM&E SWS/SS ALTERATION SSBN SWSS OER UPGRADE</i>	<i>8 / 2.500</i>	<i>2 / 0.500</i>	<i>6 / 1.500</i>	<i>4 / 1.000</i>	<i>- / -</i>	<i>4 / 1.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>20 / 5.500</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 2.500</i>	<i>- / 0.500</i>	<i>- / 1.500</i>	<i>- / 1.000</i>	<i>- / -</i>	<i>- / 1.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 5.500</i>	
Installation													
<i>Modification Item 1 of 1: EQUIPMENT HM&E SWS/SS ALTERATION SSBN SWSS OER UPGRADE</i>													
	- / 2.050	- / 0.441	- / 1.500	- / 1.000	- / -	- / 1.000	- / -	- / -	- / -	- / -	- / -	- / 4.991	
<i>Subtotal: Installation</i>	<i>- / 2.050</i>	<i>- / 0.441</i>	<i>- / 1.500</i>	<i>- / 1.000</i>	<i>- / -</i>	<i>- / 1.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 4.991</i>	
Total													
Total Cost (Procurement + Support + Installation)	4.550	0.941	3.000	2.000	-	2.000	-	-	-	-	-	10.491	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip	Modification Number / Title: 1 / EQUIPMENT HM&E SWS/SS ALTERATION SSBN SWSS OER UPGRADE

Modification Item 1 of 1: EQUIPMENT HM&E SWS/SS ALTERATION SSBN SWSS OER UPGRADE

Manufacturer Information

Manufacturer Name: Electric Boat	Manufacturer Location: Groton, CT
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 4

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Feb 2015	Feb 2016	Feb 2017				
Delivery Dates	Jun 2015	Jun 2016	Jun 2017				

Installation Information

Method of Implementation: [none specified]:: Installation Name: EQUIPMENT HM&E & SWS/SS ALTERATION SSBN SWSSOER UPGRADE

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	8 / 2.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	8 / 2.050
FY 2015	- / -	2 / 0.441	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.441
FY 2016	- / -	- / -	6 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.500
FY 2017	- / -	- / -	- / -	4 / 1.000	- / -	4 / 1.000	- / -	- / -	- / -	- / -	- / -	4 / 1.000
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	8 / 2.050	2 / 0.441	6 / 1.500	4 / 1.000	- / -	4 / 1.000	- / -	- / -	- / -	- / -	- / -	20 / 4.991

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	8	-	-	2	-	-	-	-	6	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	8	-	-	-	2	-	-	-	6	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip				Modification Number / Title: 2 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	4.098	2.916	7.318	7.380	-	7.380	5.228	6.822	2.821	2.638	18.830	58.051
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	4.098	2.916	7.318	7.380	-	7.380	5.228	6.822	2.821	2.638	18.830	58.051
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	4.098	2.916	7.318	7.380	-	7.380	5.228	6.822	2.821	2.638	18.830	58.051

(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:

SSBN Ship Control Obsolete Equipment Replacement - Perform multiple efforts to ensure that the OHIO Class Ship Control Subsystem, both hardware and software components, support the extended life of the OHIO Class submarine platforms.

Note: Production lead-time for Ship Control System OER is 17 months except for the 2 units procured in FY12. These units in addition to the normal procurement lead-time will be used in the testing and certification program of the design of this safety of ship system. This testing and certification adds an additional 22 months of lead-time. These two units procured in FY12 have a total lead-time of 39 months and will be installed in FY16.

[EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC] Installations of this ShipAlt are accomplished during SSBN refits, SSBN Extended Refit Periods (ERP), SSGN Major Maintenance Periods (MMP), and SSBN Engineered Refueling Overhauls (ERO). Installations do not complete until the availability completes. Thus the installation duration ranges from 90 days for refit installations to 821 days for ERO installations.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip					Modification Number / Title: 2 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC</i>													
B Kits													
Recurring													
1.1.1) EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC - NonOrganic	3 / 4.098	2 / 2.916	2 / 2.834	3 / 4.471	- / -	3 / 4.471	1 / 1.471	2 / 2.998	1 / 1.527	- / -	8 / 11.712	22 / 32.027	
1.1.2) SCS SSBN/SSGN INSTALLATION DSA - NonOrganic	- / -	- / -	- / 0.284	- / 0.167	- / -	- / 0.167	- / 0.265	- / 0.265	- / 0.086	- / 0.174	- / 0.426	- / 1.667	
<i>Subtotal: Recurring</i>	<i>- / 4.098</i>	<i>- / 2.916</i>	<i>- / 3.118</i>	<i>- / 4.638</i>	<i>- / -</i>	<i>- / 4.638</i>	<i>- / 1.736</i>	<i>- / 3.263</i>	<i>- / 1.613</i>	<i>- / 0.174</i>	<i>- / 12.138</i>	<i>- / 33.694</i>	
<i>Subtotal: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC</i>	<i>3 / 4.098</i>	<i>2 / 2.916</i>	<i>2 / 3.118</i>	<i>3 / 4.638</i>	<i>- / -</i>	<i>3 / 4.638</i>	<i>1 / 1.736</i>	<i>2 / 3.263</i>	<i>1 / 1.613</i>	<i>- / 0.174</i>	<i>8 / 12.138</i>	<i>22 / 33.694</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 4.098</i>	<i>- / 2.916</i>	<i>- / 3.118</i>	<i>- / 4.638</i>	<i>- / -</i>	<i>- / 4.638</i>	<i>- / 1.736</i>	<i>- / 3.263</i>	<i>- / 1.613</i>	<i>- / 0.174</i>	<i>- / 12.138</i>	<i>- / 33.694</i>	
Installation													
<i>Modification Item 1 of 1: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC</i>													
	- / 0.000	- / -	- / 4.200	- / 2.742	- / -	- / 2.742	- / 3.492	- / 3.559	- / 1.208	- / 2.464	- / 6.692	- / 24.357	
<i>Subtotal: Installation</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / 4.200</i>	<i>- / 2.742</i>	<i>- / -</i>	<i>- / 2.742</i>	<i>- / 3.492</i>	<i>- / 3.559</i>	<i>- / 1.208</i>	<i>- / 2.464</i>	<i>- / 6.692</i>	<i>- / 24.357</i>	
Total													
Total Cost (Procurement + Support + Installation)	4.098	2.916	7.318	7.380	-	7.380	5.228	6.822	2.821	2.638	18.830	58.051	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip	Modification Number / Title: 2 / EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC

Modification Item 1 of 1: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC

Manufacturer Information

Manufacturer Name: Electric Boat	Manufacturer Location: Groton, CT
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 17

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	May 2015	May 2016	Dec 2016	Apr 2018	Oct 2018	Mar 2020	
Delivery Dates	Oct 2016	Oct 2017	May 2018	Sep 2019	Mar 2020	Aug 2021	

Installation Information

Method of Implementation: [none specified]:: Installation Name: EQUIPMENT HM&E SWS/SS ALTERATION SCS SSBN/SSGN PROC

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 2.800	1 / 1.371	- / 0.000	1 / 1.371	- / -	- / -	- / -	- / -	- / 0.000	3 / 4.171
FY 2015	- / -	- / -	1 / 1.400	1 / 1.371	- / -	1 / 1.371	- / -	- / -	- / -	- / -	- / -	2 / 2.771
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.328	- / -	- / -	- / -	- / -	2 / 2.328
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.164	2 / 2.372	- / -	- / -	- / -	3 / 3.536
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.187	- / -	- / -	- / -	1 / 1.187
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.208	1 / 1.232	- / -	2 / 2.440
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.232	- / -	1 / 1.232
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 6.692	8 / 6.692
Total	- / -	- / -	3 / 4.200	2 / 2.742	- / -	2 / 2.742	3 / 3.492	3 / 3.559	1 / 1.208	2 / 2.464	8 / 6.692	22 / 24.357

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	1	1	1	-	2	-	-	1	1	1	-	1	1	-	1	-	1	-	-	-	1	-	1	8	22
Out	-	-	-	-	-	-	-	1	-	1	-	-	1	1	-	1	2	-	2	1	-	-	1	-	1	-	-	-	1	9	22

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip				Modification Number / Title: 3 / SSTG ROTORS OHIO CLASS PROCUREMENT				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	22.966	-	-	-	-	-	-	-	-	-	-	22.966
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	22.966	-	-	-	-	-	-	-	-	-	-	22.966
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	22.966	-	-	-	-	-	-	-	-	-	-	22.966
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The SSTG Rotors replace obsolete SSTG Components that are reaching the end of their design life. This eliminates the potential for catastrophic failure. This includes procurement of 1 rotor (one half of a shipset) for a Major Shore Spare (MSS).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip	Modification Number / Title: 3 / SSTG ROTORS OHIO CLASS PROCUREMENT

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> SSTG ROTORS OHIO CLASS PROCUREMENT												
B Kits												
Recurring												
1.1.1) SSTG ROTORS OHIO CLASS PROCURMENT - NonOrganic	3 / 14.460	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 14.460
<i>Subtotal: Recurring</i>	- / 14.460	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.460
<i>Subtotal: SSTG ROTORS OHIO CLASS PROCUREMENT</i>	3 / 14.460	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 14.460
<i>Subtotal: Procurement, All Modification Items</i>	- / 14.460	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.460
Installation												
<i>Modification Item 1 of 1:</i> SSTG ROTORS OHIO CLASS PROCUREMENT	- / 8.506	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.506
<i>Subtotal: Installation</i>	- / 8.506	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.506
Total												
Total Cost (Procurement + Support + Installation)	22.966	-	-	-	-	-	-	-	-	-	-	22.966

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0950 / Strategic Platform Support Equip	Modification Number / Title: 3 / SSTG ROTORS OHIO CLASS PROCUREMENT

Modification Item 1 of 1: SSTG ROTORS OHIO CLASS PROCUREMENT

Manufacturer Information

Manufacturer Name: Electric Boat	Manufacturer Location: Groton, CT
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 24

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: SSTG ROTORS OHIO CLASS PROCURMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	3 / 8.506	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	3 / 8.506
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	3 / 8.506	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 8.506

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0955 / Deep Subm Sys Proj (DSSP) Equip

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	135.248	5.518	7.376	0.806	-	0.806	4.165	3.828	3.097	3.157	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	135.248	5.518	7.376	0.806	-	0.806	4.165	3.828	3.097	3.157	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	135.248	5.518	7.376	0.806	-	0.806	4.165	3.828	3.097	3.157	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2017 funding request was reduced by \$1,999 thousand to account for the availability of prior years execution balance.

The Submarine Escape and Rescue Program, formerly Deep Submergence Systems Program (DSSP), is responsible for the procurement, life cycle support, and improvement and modernization of assigned platforms and programs. The Submarine Escape and Rescue Program provides for the procurement of equipment to support the establishment and maintenance of fleet capability for a number of programs which perform submarine search and rescue, inspection, and object location and retrieval from the ocean environment. Submarine Escape and Rescue procurements replace obsolete, non-supportable equipment and subsystems through phased improvement and modernization projects. These projects may include special ship alterations, field change kits, and design corrections.

SOURCES: The sources for these acquisitions are limited. There are few private companies actively engaged in deep ocean engineering and even fewer with the specialized experience, knowledge, and facilities to meet the exacting requirement of the Submarine Escape and Rescue Program. Accordingly, sole source contracts are sometimes required; however, where possible, contracting via open competition is utilized.

REFERENCES:

Acquisition Plans 584-87 Revision 7 approved August 2000. Acquisition plan for Submarine Escape and Rescue is reviewed twice annually by the Submarine Escape and Rescue Review Group (SERRG).

[P40A / HJ030 - RESCUE SUPPORT EQUIPMENT]: INTERVENTION SYSTEMS (ATMOSPHERIC DIVING SYSTEM (ADS)/REMOTE OPERATED VEHICLE (ROV))/SUBMARINE RESCUE DIVING and RECOMPRESSION SYSTEM (SRDRS)/SUBMARINE RESCUE CHAMBER (SRC) Intervention assets (ADS/ROV) are required to support the SRDRS and SRC world-wide rescue capability mission. Intervention assets are used to clear disabled submarines seating surfaces, attach the SRC downhaul cable, attach salvage fittings, deliver emergency life support stores, and assess disabled submarines. The ADS is a modified COTS one-man, one atmosphere diving system. An initiative is in process to transition from the ADS manned system to an unmanned ROV to reduce operational risk; full transition is pending availability of funding for second ROV. SRC provides shallow water rescue capability. SRDRS is the deep water rescue vehicle and will be delivered in increments. The Submarine Rescue System-Rescue Capable System (SRS-RCS) completed OPEVAL in FY08 and is currently the deep water rescue ready vehicle for the U.S. Navy. The final component of SRDRS is Transfer Under Pressure (TUP) or Submarine Rescue System-Submarine Decompression System (SRS-SDS). Full Operational Capability (FOC) has been delayed due to efforts associated with Pressurized Rescue Module (PRM) restoration to service.

SURVIVABILITY This equipment will provide a more efficient CO2 removal capability giving the fleet an increase in survival time from 3 days to 7 days for a disabled submarine and adds state of the art atmospheric monitoring equipment aboard each submarine.

[P40A / HJ100 - SUBMARINE ESCAPE & IMMERSION EQUIPMENT]: SUBMARINE ESCAPE & IMMERSION EQUIPMENT (SEIE)

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0955 / Deep Subm Sys Proj (DSSP) Equip
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>The SEIE is used by a submariner to escape from a disabled submarine and survive on the surface until rescued. The system, adapted from a British design, includes the escape suit, inner thermal suit and a single person life raft; all packaged as a unit onboard the submarine. This is a safety/survival appliance that is vastly superior to the obsolete Steinke Hood escape appliance. The SEIE increases the escape depth to 600 FSW and provides thermal protection to the user from hypothermia. Also includes mandatory escape assistance devices for all escape trunk hatches to ensure safe escape by personnel from the disabled submarine.</p> <p>[P40A / HJ927 - EQUIPMENT INSTALLATION]: EQUIPMENT INSTALLATION (HJ927) These funds are for the installation of the Submarine Escape and Rescue Program equipment, as well as the SEIE equipment.</p> <p>[P40A / HJINS - EQUIPMENT INSTALLATION]: EQUIPMENT INSTALLATION (HJINS) These funds are for the installation of the Submarine Escape and Rescue Program equipment, as well as the SEIE equipment.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment
P-1 Line Item Number / Title: 0955 / Deep Subm Sys Proj (DSSP) Equip

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Deep Subm Sys Proj (DSSP) Equip			- / 135.248	- / 5.518	- / 7.376	- / 0.806	- / -	- / 0.806
P-40	Total Gross/Weapon System Cost			- / 135.248	- / 5.518	- / 7.376	- / 0.806	- / -	- / 0.806

*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:

FY15 funding levels include one intervention unmanned Remote Operated Vehicle (ROV) to support transition from the manned Atmospheric Diving System (ADS). FY16 funding levels support Submarine Rescue Diving and Recompression System (SRDRS) upgrades and spares in support of TUP capability and procurement of Submarine Rescue Chamber hoses. FY18 and beyond funding levels support SRDRS following Full Operational Capability.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0955 / Deep Subm Sys Proj (DSSP) Equip **Aggregated Items Title:** Deep Subm Sys Proj (DSSP) Equip

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) HJ030 - RESCUE SUPPORT EQUIPMENT																				
1.1) Vehicles Upgrades	A		-	-	0.055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) ADS LARS 1	A		-	-	0.508	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3) SRDRS Spares and Tools	A		-	-	4.335	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) ADS Suit 1 Upgrade/Cert	A		-	-	0.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) LARS Deck Skid	A		-	-	0.491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6) SRC Materials ⁽¹⁾	A		-	-	0.809	-	-	1.117	-	-	1.188	-	-	0.260	-	-	-	-	-	0.260
1.7) SRDRS System Upgrade and Upgrade Spares ⁽²⁾	A		-	-	27.854	-	-	4.401	-	-	6.188	-	-	0.546	-	-	-	-	-	0.546
1.8) ADS Upgrades	A		-	-	14.238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.9) UMV Upgrades	A		-	-	0.117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.10) SRDRS Mooring System Upgrade	A		-	-	1.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.11) Upper Hatch Linkage Upgrades	A		-	-	2.077	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) HJ030 - RESCUE SUPPORT EQUIPMENT			-	-	52.090	-	-	5.518	-	-	7.376	-	-	0.806	-	-	-	-	-	0.806
2) HJ100 - SUBMARINE ESCAPE & IMMERSION EQUIPMENT																				
2.1) LA Class SEIE Equipment Upgrade	A		-	-	0.343	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) LA Class SEIE Suit Sets	A		-	-	36.238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) HJ100 - SUBMARINE ESCAPE & IMMERSION EQUIPMENT			-	-	36.581	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3) HJ927 - EQUIPMENT INSTALLATION																				
3.1) Install of Equipment (FMP)	A		-	-	44.484	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) HJ927 - EQUIPMENT INSTALLATION			-	-	44.484	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4) HJINS - EQUIPMENT INSTALLATION																				
4.1) Install of Equipment	A		-	-	2.093	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) HJINS - EQUIPMENT INSTALLATION			-	-	2.093	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	135.248	-	-	5.518	-	-	7.376	-	-	0.806	-	-	-	-	-	0.806

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

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0955 / Deep Subm Sys Proj (DSSP) Equip	Aggregated Items Title: Deep Subm Sys Proj (DSSP) Equip

Footnotes:

⁽¹⁾ FY15 and FY16 funding levels supports procurement of Submarine Rescue Chamber (SRC) hoses.

⁽²⁾ FY15 funding levels include procurement of one Transfer Skirt Adapter. FY16 funding levels include one intervention unmanned Remote Operated Vehicle (ROV) to support transition from the manned Atmospheric Diving System (ADS) and Submarine Rescue Diving and Recompression System (SRDRS) upgrades and initial spares in support of Transfer Under pressure (TUP) capability. FY17 funding levels were reduced due to contract award delays impacting FY15 obligations; funding reductions in FY17 were reprogrammed into FY18 and FY19.

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0960 / CG Modernization

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,094.518	375.500	-	-	-	-	-	-	-	116.317	15.284	2,601.619
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,094.518	375.500	-	-	-	-	-	-	-	116.317	15.284	2,601.619
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,094.518	375.500	-	-	-	-	-	-	-	116.317	15.284	2,601.619

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	3.588	-	3.588	0.466	0.952	-	1.485	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Modernized CG47 Class ships will operate independently or as units of Carrier Battle Groups and Surface Action Groups, in support of the Marine Amphibious Task Forces in multi-threat environments that include air, surface and subsurface threats. These ships will respond to Low Intensity Conflict/Coastal and Littoral Offshore Warfare and joint mission scenarios as well as open ocean conflict, providing and augmenting power projection and forward presence. These ships will conduct Air Dominance, Land Attack, and Force Protection missions.

[P40A / CC002 - SARTIS]: Procures Shipboard Advanced Radar Target Identification System (SARTIS) including equipment procurement, recurring equipment engineering, equipment integration, and ILS.

[P40A / CC005 - SGS/CDLMS]: Procures Ship Gridlock System (SGS) and the Common Data Link Management System (CDLMS) for Baseline 2 ships including equipment procurement, recurring equipment engineering, equipment integration, and ILS.

[P40A / CC012 - VIRGINIA SITES]: Procures Commercial Off The Shelf (COTS) equipment to support C/S capabilities including equipment procurement, recurring equipment engineering, equipment integration, and ILS for various Virginia Sites test facilities. Virginia Sites perform a variety of functions including life-cycle support of the AWS and AEGIS combat training for officer and enlisted watch standers.

[P40A / CC013 - INSTALLATION / DSA / AIT]: Provides Planning Yard Design Services Allocation (DSA) (design, advance planning, and kitted material), MSR installations and AIT installation support.

[P40A / CC014 - CONJUNCTIVE COMBAT SYSTEM ALTERATIONS]: Conjunctive Combat System Alterations includes design integration, equipment procurement, recurring equipment engineering, equipment integration, and ILS.

[P40A / CC017 - MULTI-MISSION BMD CAPABILITIES]: Procures Multi-Mission Ballistic Missile Defense (BMD) Capability including equipment procurement, recurring equipment engineering, equipment integration, and ILS.

[P40A / CC018 - MULTI-MISSION SSA/CWI MICROWAVE TUBES]: Procures Multi-Mission Solid State Amplifier (SSA)/Continuous Wave Illuminator (CWI) Microwave Tubes including equipment procurement, recurring equipment engineering, equipment integration, and ILS.

[P3A / CC001 - SPQ-9B UPGRADE]: Procures SPQ-9B for all CG Modernization ships including equipment procurement, recurring equipment engineering, equipment integration, and Integrated Logistics.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0960 / CG Modernization
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P3A - 2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)]: Procures Cooperative Engagement Capability (CEC) for all ships including equipment procurement, recurring equipment engineering, equipment integration, and ILS.</p> <p>[P3A - 3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT]: Procures AN/SQQ-89 A(V) 15 for Baseline 3 and 4 ships including equipment procurement, recurring equipment engineering, equipment integration, and ILS.</p> <p>[P3A - 4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT]: Procures AEGIS Weapons System (AWS) upgrade for all ships including equipment procurement, recurring equipment engineering, equipment integration, and ILS.</p> <p>[P3A - 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)]: Procures Vertical Launch System (VLS) upgrade for all ships including equipment procurement, recurring equipment engineering, equipment integration, and ILS.</p> <p>[P3A - 6 / CC010 - MK34 UPGRADE]: Procures MK34 Gun Weapon System (GWS) upgrade for all ships including equipment procurement, recurring equipment engineering, equipment integration, and ILS.</p> <p>[P3A - 7 / CC011 - INTEGRATED SHIP CONTROLS (ISC)]: Procures Smartship Integrated Ship Controls (ISC) for all ships requiring upgrade including equipment procurement, recurring equipment engineering, equipment integration, and ILS.</p> <p>[P3A - 8 / CC015 - MULTI-MISSION SIGPRO]: Procures Multi-Mission Signal Processor (MMSP) including equipment procurement, recurring equipment engineering, equipment integration, and ILS.</p> <p>[P3A - 9 / CC016 - SPY-1B VARIANCE TRANSMITTER UPGRADES]: Procures SPY-1B Variance Transmitter Upgrades including equipment procurement, recurring equipment engineering, equipment integration, and ILS.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:**
 0960 / CG Modernization

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	CG Modernization			- / 596.927	- / 87.620	- / -	- / -	- / -	- / -
P-3a	1 / CC001 - SPQ-9B UPGRADE (TBD)			- / 124.579	- / 15.270	- / -	- / -	- / -	- / -
P-3a	2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC) (TBD)			- / 99.369	- / 21.910	- / -	- / -	- / -	- / -
P-3a	3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT (TBD)			- / 165.342	- / 63.580	- / -	- / -	- / -	- / -
P-3a	4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT (TBD)			- / 598.112	- / 104.000	- / -	- / -	- / -	- / -
P-3a	5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS) (TBD)			- / 190.759	- / 44.280	- / -	- / -	- / -	- / -
P-3a	6 / CC010 - MK34 UPGRADE (TBD)			- / 145.077	- / 24.660	- / -	- / -	- / -	- / -
P-3a	7 / CC011 - INTEGRATED SHIP CONTROLS (ISC) (TBD)			- / 77.573	- / 14.180	- / -	- / -	- / -	- / -
P-3a	8 / CC015 - MULTI-MISSION SIGPRO (TBD)			- / 66.000	- / -	- / -	- / -	- / -	- / -
P-3a	9 / CC016 - SPY-1B VARIANCE TRANSMITTER UPGRADES (TBD)			- / 30.780	- / -	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 2,094.518	- / 375.500	- / -	- / -	- / -	- / -

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	CG Modernization			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / CC001 - SPQ-9B UPGRADE (TBD)			- / -	- / -	- / -	- / 8.150	- / -	- / 147.999
P-3a	2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC) (TBD)			- / -	- / -	- / -	- / 6.230	- / -	- / 127.509
P-3a	3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT (TBD)			- / -	- / -	- / -	- / 18.050	- / -	- / 246.972
P-3a	4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT (TBD)			- / -	- / -	- / -	- / 29.170	- / -	- / 731.282
P-3a	5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS) (TBD)			- / -	- / -	- / -	- / 12.700	- / 15.284	- / 263.023
P-3a	6 / CC010 - MK34 UPGRADE (TBD)			- / -	- / -	- / -	- / 6.900	- / -	- / 176.637
P-3a	7 / CC011 - INTEGRATED SHIP CONTROLS (ISC) (TBD)			- / -	- / -	- / -	- / 7.200	- / -	- / 98.953
P-3a	8 / CC015 - MULTI-MISSION SIGPRO (TBD)			- / -	- / -	- / -	- / -	- / -	- / 66.000
P-3a	9 / CC016 - SPY-1B VARIANCE TRANSMITTER UPGRADES (TBD)			- / -	- / -	- / -	- / -	- / -	- / 30.780
P-40	Total Gross/Weapon System Cost			- / -	- / -	- / -	- / 116.317	- / 15.284	- / 2,601.619

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0960 / CG Modernization **Aggregated Items Title:** CG Modernization ⁽¹⁾

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
1) CC002 - SARTIS																				
1.1) SARTIS EQUIPMENT ⁽²⁾	A		282.571	7	1.978	130.000	4	0.520	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) CC002 - SARTIS			-	-	1.978	-	-	0.520	-	-	-	-	-	-	-	-	-	-	-	-
2) CC005 - SGS/CDLMS																				
2.1) SGS/CDLMS EQUIPMENT	A		820.143	7	5.741	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2) SGS/CDLMS ENGINEERING SERVICES	A		-	-	0.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) CC005 - SGS/CDLMS			-	-	6.441	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3) CC012 - VIRGINIA SITES																				
3.1) VIRGINIA SITES	A		-	-	82.028	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) CC012 - VIRGINIA SITES			-	-	82.028	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4) CC013 - INSTALLATION / DSA / AIT																				
4.1) INSTALLATION / DSA / AIT ⁽³⁾	A		-	-	294.562	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) CC013 - INSTALLATION / DSA / AIT			-	-	294.562	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5) CC014 - CONJUNCTIVE COMBAT SYSTEM ALTERATIONS																				
5.1) CONJUNCTIVE COMBAT SYSTEM ALTERATION EQUIPMENT ⁽⁴⁾	A		-	-	203.838	21,775.000	4	87.100	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) CC014 - CONJUNCTIVE COMBAT SYSTEM ALTERATIONS			-	-	203.838	-	-	87.100	-	-	-	-	-	-	-	-	-	-	-	-
6) CC017 - MULTI-MISSION BMD CAPABILITIES																				
6.1) MULTI-MISSION BMD CAPABILITIES EQUIPMENT	A		1,553.333	3	4.660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) CC017 - MULTI-MISSION BMD CAPABILITIES			-	-	4.660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7) CC018 - MULTI-MISSION SSA/CWI MICROWAVE TUBES																				
7.1) MULTI-MISSION SSA/CWI MICROWAVE TUBE EQUIPMENT	A		1,140.000	3	3.420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) CC018 - MULTI-MISSION SSA/CWI MICROWAVE TUBES			-	-	3.420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	596.927	-	-	87.620	-	-	-	-	-	-	-	-	-	-	-	-

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

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Aggregated Items Title: CG Modernization ⁽¹⁾

Footnotes:

- ⁽¹⁾ The Consolidated Appropriations Act, 2015, H.R. 83, Section 8110 re-appropriated and extended the Ship Modernization, Operations and Sustainment Fund (SMOSF) to provide for costs associated with the continued operations and modernization of eleven cruisers. Received \$375,500,000 FY15 SMOSF for the CG 63 USS Cowpens, CG 64 USS Gettysburg, CG 65 USS Chosin and CG 69 USS Vicksburg.
- ⁽²⁾ FY15 combat systems procurement for CG 63 USS Cowpens, CG 64 USS Gettysburg, CG 65 USS Chosin and CG 69 USS Vicksburg.
- ⁽³⁾ FY15 SMOSF for First Year DSA and ADVANCE PLANNING LLTM on the CG 63 USS Cowpens, CG 64 USS Gettysburg, CG 65 USS Chosin and CG 69 USS Vicksburg.
- ⁽⁴⁾ FY21 combat systems procurement for the CG 67 USS Shiloh. FY21 DSA, LLTM, and installation funding for the CG 66 Hue City, CG 65 USS Chosin and CG 69 USS Vicksburg will be funded by a SMOSF request. FY21 ISC procurement is for the CG 66 USS Hue City.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 1 / CC001 - SPQ-9B UPGRADE
---	---	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	124.579	15.270	-	-	-	-	-	-	-	8.150	-	147.999
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	124.579	15.270	-	-	-	-	-	-	-	8.150	-	147.999
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	124.579	15.270	-	-	-	-	-	-	-	8.150	-	147.999
<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 Thousands)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Replaces the existing AN/SPQ-9A heavyweight (HW) Radar Set with the AN/SPQ-9B lightweight (LW) Radar Set. Supports associated DSA and Planning for installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0960 / CG Modernization					Modification Number / Title: 1 / CC001 - SPQ-9B UPGRADE			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 1: CC001 - SPQ-9B UPGRADE													
B Kits													
Recurring													
1.1.1) CC001 - SPQ-9B EQUIPMENT - NonOrganic ⁽⁵⁾	10 / 95.419	2 / 13.150	2 / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / 7.320	5 / -	21 / 115.889	
1.1.2) CC001 - SPQ-9B ENGINEERING SERVICES - NonOrganic	- / 7.343	- / 1.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.830	- / -	- / 10.073	
<i>Subtotal: Recurring</i>	- / 102.762	- / 15.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.150	- / -	- / 125.962	
<i>Subtotal: CC001 - SPQ-9B UPGRADE</i>	10 / 102.762	2 / 15.050	2 / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / 8.150	5 / -	21 / 125.962	
<i>Subtotal: Procurement, All Modification Items</i>	- / 102.762	- / 15.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.150	- / -	- / 125.962	
Installation													
Modification Item 1 of 1: CC001 - SPQ-9B UPGRADE	- / 21.817	- / 0.220	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.037	
<i>Subtotal: Installation</i>	- / 21.817	- / 0.220	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.037	
Total													
Total Cost (Procurement + Support + Installation)	124.579	15.270	-	-	-	-	-	-	-	8.150	-	147.999	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 1 / CC001 - SPQ-9B UPGRADE

Modification Item 1 of 1: CC001 - SPQ-9B UPGRADE

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN	Manufacturer Location: MELVILLE, NY
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2016						Jul 2021
Delivery Dates	Sep 2017						Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC001 - SPQ-9B EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 21.817	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	10 / 21.817
FY 2015	- / -	- / 0.220	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	- / -	- / -	2 / 0.220
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / -	- / -	2 / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / -	5 / -
Total	10 / 21.817	- / 0.220	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	7 / -	21 / 22.037

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	10	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	7	21
Out	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	9	21

Footnotes:

(5) FY 15 combat systems procurements for the CG 63 USS Cowpens, CG 64 USS Gettysburg. FY 16 procurements for CG 65 USS Chosin and CG 69 USS Vicksburg will be funded by SMOSF. Initial DSA costs were funded by SMOSF and will fund the SSRA in FY 16 for the CG 63 USS Cowpens and CG 64 USS Gettysburg. SMOSF funding will be provided to support installation, DSA, and LLTM for the CG 63 USS Cowpens and CG 64 USS Gettysburg in FY 18; and for the CG 65 USS Chosin and CG 69 USS Vicksburg in FY 21. FY 20 combat systems procurement for CG66 USS Hue City will be funded with SMOSF. FY 21 combat systems procurement is for the CG 67 USS Shiloh.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0960 / CG Modernization				Modification Number / Title: 2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	99.369	21.910	-	-	-	-	-	-	-	6.230	-	127.509
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	99.369	21.910	-	-	-	-	-	-	-	6.230	-	127.509
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	99.369	21.910	-	-	-	-	-	-	-	6.230	-	127.509
<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 Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procure and install Cooperative Engagement Capability (CEC). Supports DSA and Planning for installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0960 / CG Modernization					Modification Number / Title: 2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)</i>													
B Kits													
Recurring													
1.1.1) CC003 - CEC EQUIPMENT - NonOrganic ⁽⁶⁾	10 / 70.388	4 / 20.130	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / 5.600	5 / -	21 / 96.118	
1.1.2) CC003 - CEC ENGINEERING SERVICES - NonOrganic	- / 6.779	- / 1.550	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.630	- / -	- / 8.959	
<i>Subtotal: Recurring</i>	<i>- / 77.167</i>	<i>- / 21.680</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 6.230</i>	<i>- / -</i>	<i>- / 105.077</i>	
<i>Subtotal: CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)</i>	<i>10 / 77.167</i>	<i>4 / 21.680</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1 / -</i>	<i>1 / 6.230</i>	<i>5 / -</i>	<i>21 / 105.077</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 77.167</i>	<i>- / 21.680</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 6.230</i>	<i>- / -</i>	<i>- / 105.077</i>	
Installation													
<i>Modification Item 1 of 1: CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)</i>													
<i>Subtotal: Installation</i>	<i>- / 22.202</i>	<i>- / 0.230</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 22.432</i>	
Total													
Total Cost (Procurement + Support + Installation)	99.369	21.910	-	-	-	-	-	-	-	6.230	-	127.509	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 2 / CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)

Modification Item 1 of 1: CC003 - COOPERATIVE ENGAGEMENT CAPABILITIES (CEC)

Manufacturer Information

Manufacturer Name: RAYTHEON	Manufacturer Location: ST. PETERSBURG, FL
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Sep 2015						Jul 2021
Delivery Dates	Mar 2017						Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC003 - CEC EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 22.202	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	10 / 22.202
FY 2015	- / -	- / 0.230	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	- / -	4 / 0.230
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / -	5 / -
Total	10 / 22.202	- / 0.230	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	7 / -	21 / 22.432

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	10	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	7	21
Out	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	9	21

Footnotes:
 (6) FY 15 combat systems procurements for the CG 63 USS Cowpens, CG 64 USS Gettysburg, CG 65 USS Chosin and CG 69 USS Vicksburg. Initial DSA costs were funded by SMOSF and will fund the SSRA in FY 16 for the CG 63 USS Cowpens and CG 64 USS Gettysburg. SMOSF funding will be provided to support installation, DSA, and LLTM for the CG 63 USS Cowpens and CG 64 USS Gettysburg in FY 18; and for the CG 65 USS Chosin and CG 69 USS Vicksburg in FY 21. FY 20 combat systems procurement for CG66 USS Hue City will be funded with SMOSF. FY 21 combat systems procurement is for the CG 67 USS Shiloh.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0960 / CG Modernization				Modification Number / Title: 3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	165.342	63.580	-	-	-	-	-	-	-	18.050	-	246.972
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	165.342	63.580	-	-	-	-	-	-	-	18.050	-	246.972
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	165.342	63.580	-	-	-	-	-	-	-	18.050	-	246.972
<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 Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procure and Install AN/SQQ-89 A(V) 15 for CG Modernization. Supports DSA and Planning for installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0960 / CG Modernization					Modification Number / Title: 3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT</i>													
B Kits													
Recurring													
1.1.1) CC004 - AN/SQQ-89 A(V) 15 EQUIPMENT - NonOrganic ⁽⁷⁾	10 / 111.841	4 / 58.270	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / 16.210	5 / -	21 / 186.321	
1.1.2) CC004 - AN/SQQ-89 A(V) 15 ENGINEERING SERVICES - NonOrganic	- / 136.800	- / 4.490	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.840	- / -	- / 43.130	
<i>Subtotal: Recurring</i>	<i>- / 148.641</i>	<i>- / 62.760</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 18.050</i>	<i>- / -</i>	<i>- / 229.451</i>	
<i>Subtotal: CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT</i>	<i>10 / 148.641</i>	<i>4 / 62.760</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1 / -</i>	<i>1 / 18.050</i>	<i>5 / -</i>	<i>21 / 229.451</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 148.641</i>	<i>- / 62.760</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 18.050</i>	<i>- / -</i>	<i>- / 229.451</i>	
Installation													
<i>Modification Item 1 of 1: CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT</i>													
<i>Subtotal: Installation</i>	<i>- / 16.701</i>	<i>- / 0.820</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 17.521</i>	
Total													
Total Cost (Procurement + Support + Installation)	165.342	63.580	-	-	-	-	-	-	-	18.050	-	246.972	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 3 / CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT

Modification Item 1 of 1: CC004 - AN/SQQ-89 A(V) 15 PROCUREMENT

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN				Manufacturer Location: SYRACUSE, NY			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 18			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jun 2016						Jul 2021
Delivery Dates	Dec 2017						Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC004 - AN/SQQ-89 A(V) 15 EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 16.701	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	10 / 16.701
FY 2015	- / -	- / 0.820	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	- / -	4 / 0.820
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / -	5 / -
Total	10 / 16.701	- / 0.820	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	7 / -	21 / 17.521

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	10	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	7	21
Out	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	9	21

Footnotes:

(7) FY 15 combat systems procurements for the CG 63 USS Cowpens, CG 64 USS Gettysburg, CG 65 USS Chosin and CG 69 USS Vicksburg. Initial DSA costs were funded by SMOSF and will fund the SSRA in FY 16 for the CG 63 USS Cowpens and CG 64 USS Gettysburg. SMOSF funding will be provided to support installation, DSA, and LLTM for the CG 63 USS Cowpens and CG 64 USS Gettysburg in FY 18; and for the CG 65 USS Chosin and CG 69 USS Vicksburg in FY 21. FY 20 combat systems procurement for CG66 USS Hue City will be funded with SMOSF. FY 21 combat systems procurement is for the CG 67 USS Shiloh.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0960 / CG Modernization				Modification Number / Title: 4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	598.112	104.000	-	-	-	-	-	-	-	29.170	-	731.282
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	598.112	104.000	-	-	-	-	-	-	-	29.170	-	731.282
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	598.112	104.000	-	-	-	-	-	-	-	29.170	-	731.282
<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 Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides improved computing and display capabilities, faster processing, and greater track capacity. Supports DSA and Planning for installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0960 / CG Modernization					Modification Number / Title: 4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT</i>													
B Kits													
Recurring													
1.1.1) CC007 - AWS EQUIPMENT - NonOrganic ⁽⁸⁾	10 / 369.548	4 / 94.170	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / 26.200	5 / -	21 / 489.918	
1.1.2) CC007 - AWS ENGINEERING SERVICES - NonOrganic	- / 30.289	- / 7.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.970	- / -	- / 40.519	
<i>Subtotal: Recurring</i>	<i>- / 399.837</i>	<i>- / 101.430</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 29.170</i>	<i>- / -</i>	<i>- / 530.437</i>	
<i>Subtotal: CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT</i>	<i>10 / 399.837</i>	<i>4 / 101.430</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1 / -</i>	<i>1 / 29.170</i>	<i>5 / -</i>	<i>21 / 530.437</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 399.837</i>	<i>- / 101.430</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 29.170</i>	<i>- / -</i>	<i>- / 530.437</i>	
Installation													
<i>Modification Item 1 of 1: CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT</i>													
<i>Subtotal: Installation</i>	<i>- / 198.275</i>	<i>- / 2.570</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 200.845</i>	
Total													
Total Cost (Procurement + Support + Installation)	598.112	104.000	-	-	-	-	-	-	-	29.170	-	731.282	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 4 / CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT

Modification Item 1 of 1: CC007 - AEGIS WEAPONS SYSTEM (AWS) UPGRADE PROCUREMENT

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN				Manufacturer Location: MOORESTOWN, NJ			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 20			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Apr 2016						May 2021
Delivery Dates	Dec 2017						Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC007 - AWS EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 198.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	10 / 198.275
FY 2015	- / -	- / 12.570	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	- / -	4 / 2.570
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / -	5 / -
Total	10 / 198.275	- / 12.570	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	7 / -	21 / 200.845

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	10	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	7	21
Out	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	9	21

Footnotes:

(8) FY 15 combat systems procurements for the CG 63 USS Cowpens, CG 64 USS Gettysburg, CG 65 USS Chosin and CG 69 USS Vicksburg. Initial DSA costs were funded by SMOSF and will fund the SSRA in FY 16 for the CG 63 USS Cowpens and CG 64 USS Gettysburg. SMOSF funding will be provided to support installation, DSA, and LLTM for the CG 63 USS Cowpens and CG 64 USS Gettysburg in FY 18; and for the CG 65 USS Chosin and CG 69 USS Vicksburg in FY 21. FY 20 combat systems procurement for CG66 USS Hue City will be funded with SMOSF. FY 21 combat systems procurement is for the CG 67 USS Shiloh.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0960 / CG Modernization				Modification Number / Title: 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	190.759	44.280	-	-	-	-	-	-	-	12.700	15.284	263.023
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	190.759	44.280	-	-	-	-	-	-	-	12.700	15.284	263.023
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	190.759	44.280	-	-	-	-	-	-	-	12.700	15.284	263.023
<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 Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides VLS upgrades one module forward and one module aft to support evolved sea sparrow missile system capability. Supports DSA and Planning for installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0960 / CG Modernization					Modification Number / Title: 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: CC008 - VERTICAL LAUNCH SYSTEM (VLS)</i>													
B Kits													
Recurring													
1.1.1) CC008 - VLS ENGINEERING SERVICES - NonOrganic ⁽⁹⁾	- / 4.169	- / 3.160	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.290	- / -	- / 8.619	
1.1.2) CC008 - VLS EQUIPMENT - NonOrganic ⁽¹⁰⁾	10 / 171.426	4 / 41.000	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / 11.410	5 / -	21 / 223.836	
<i>Subtotal: Recurring</i>	<i>- / 175.595</i>	<i>- / 44.160</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 12.700</i>	<i>- / -</i>	<i>- / 232.455</i>	
<i>Subtotal: CC008 - VERTICAL LAUNCH SYSTEM (VLS)</i>	<i>10 / 175.595</i>	<i>4 / 44.160</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1 / -</i>	<i>1 / 12.700</i>	<i>5 / -</i>	<i>21 / 232.455</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 175.595</i>	<i>- / 44.160</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 12.700</i>	<i>- / -</i>	<i>- / 232.455</i>	
Installation													
<i>Modification Item 1 of 1: CC008 - VERTICAL LAUNCH SYSTEM (VLS)</i>	<i>- / 15.164</i>	<i>- / 0.120</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 15.284</i>	<i>- / 30.568</i>	
<i>Subtotal: Installation</i>	<i>- / 15.164</i>	<i>- / 0.120</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 15.284</i>	<i>- / 30.568</i>	
Total													
Total Cost (Procurement + Support + Installation)	190.759	44.280	-	-	-	-	-	-	-	12.700	15.284	263.023	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)

Modification Item 1 of 1: CC008 - VERTICAL LAUNCH SYSTEM (VLS)

Manufacturer Information

Manufacturer Name: LOCHEED MARTIN	Manufacturer Location: BALTIMORE, MD
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jun 2016						Jul 2021
Delivery Dates	Dec 2017						Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC008 - VLS ENGINEERING SERVICES

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Method of Implementation: [none specified]:: Installation Name: CC008 - VLS EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 15.164	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	10 / 15.164

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 5 / CC008 - VERTICAL LAUNCH SYSTEM (VLS)

Modification Item 1 of 1: CC008 - VERTICAL LAUNCH SYSTEM (VLS)

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC008 - VLS EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / 0.120	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	- / -	4 / 0.120
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 15.284	5 / 15.284
Total	10 / 15.164	- / 0.120	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	7 / 15.284	21 / 30.568

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	10	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	7	21
Out	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	9	21

Footnotes:

(9) FY 15 combat systems procurements for the CG 63 USS Cowpens, CG 64 USS Gettysburg, CG 65 USS Chosin and CG 69 USS Vicksburg. Initial DSA costs were funded by SMOSF and will fund the SSRA in FY 16 for the CG 63 USS Cowpens and CG 64 USS Gettysburg. SMOSF funding will be provided to support installation, DSA, and LLTM for the CG 63 USS Cowpens and CG 64 USS Gettysburg in FY 18; and for the CG 65 USS Chosin and CG 69 USS Vicksburg in FY 21. FY 20 combat systems procurement for CG66 USS Hue City will be funded with SMOSF. FY 21 combat systems procurement is for the CG 67 USS Shiloh.

(10) FY15 combat systems procurement for CG 63 USS Cowpens, CG 64 USS Gettysburg, CG 65 USS Chosin and CG 69 USS Vicksburg. FY17 installations are based on the "All-in by FY17" plan; CG 66 USS Hue City, CG 67 USS Shiloh, CG 68 USS Anzio, CG 70 USS Lake Erie, CG 71 USS Cape St. George, CG 72 USS Vella Gulf and CG 73 USS Port Royal will be inducted in to CG Modernization in FY17. FY21 combat systems procurement is for the CG 67 USS Shiloh.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 6 / CC010 - MK34 UPGRADE
---	---	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	145.077	24.660	-	-	-	-	-	-	-	6.900	-	176.637
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	145.077	24.660	-	-	-	-	-	-	-	6.900	-	176.637
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	145.077	24.660	-	-	-	-	-	-	-	6.900	-	176.637

(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 Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procures the MK34 Mod 4 Gun Weapon System (GWS) to replace the existing MK86 Gun Fire Control System. Supports DSA and Planning for installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0960 / CG Modernization					Modification Number / Title: 6 / CC010 - MK34 UPGRADE			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: CC010 - MK34 UPGRADE</i>													
B Kits													
Recurring													
1.1.1) CC010 - MK34 EQUIPMENT - NonOrganic ⁽¹¹⁾	10 / 88.291	4 / 22.300	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / 6.200	5 / -	21 / 116.791	
1.1.2) CC010 - MK34 ENGINEERING SERVICES - NonOrganic	- / 19.881	- / 1.720	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.700	- / -	- / 22.301	
<i>Subtotal: Recurring</i>	<i>- / 108.172</i>	<i>- / 24.020</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 6.900</i>	<i>- / -</i>	<i>- / 139.092</i>	
<i>Subtotal: CC010 - MK34 UPGRADE</i>	<i>10 / 108.172</i>	<i>4 / 24.020</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1 / -</i>	<i>1 / 6.900</i>	<i>5 / -</i>	<i>21 / 139.092</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 108.172</i>	<i>- / 24.020</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 6.900</i>	<i>- / -</i>	<i>- / 139.092</i>	
Installation													
<i>Modification Item 1 of 1: CC010 - MK34 UPGRADE</i>	<i>- / 36.905</i>	<i>- / 0.640</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 37.545</i>	
<i>Subtotal: Installation</i>	<i>- / 36.905</i>	<i>- / 0.640</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 37.545</i>	
Total													
Total Cost (Procurement + Support + Installation)	145.077	24.660	-	-	-	-	-	-	-	6.900	-	176.637	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 6 / CC010 - MK34 UPGRADE

Modification Item 1 of 1: CC010 - MK34 UPGRADE

Manufacturer Information

Manufacturer Name: Various				Manufacturer Location: Various			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 18			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Sep 2015						Jul 2021
Delivery Dates	Mar 2017						Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC010 - MK34 EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 36.905	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	10 / 36.905
FY 2015	- / -	- / 0.640	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	- / -	4 / 0.640
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / -	5 / -
Total	10 / 36.905	- / 0.640	- / -	- / -	- / -	- / -	2 / -	- / -	- / -	2 / -	7 / -	21 / 37.545

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	10	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	7	21
Out	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	9	21

Footnotes:

(11) FY 15 combat systems procurements for the CG 63 USS Cowpens, CG 64 USS Gettysburg, CG 65 USS Chosin and CG 69 USS Vicksburg. Initial DSA costs were funded by SMOSF and will fund the SSRA in FY 16 for the CG 63 USS Cowpens and CG 64 USS Gettysburg. SMOSF funding will be provided to support installation, DSA, and LLTM for the CG 63 USS Cowpens and CG 64 USS Gettysburg in FY 18; and for the CG 65 USS Chosin and CG 69 USS Vicksburg in FY 21. FY 20 combat systems procurement for CG66 USS Hue City will be funded with SMOSF. FY 21 combat systems procurement is for the CG 67 USS Shiloh.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0960 / CG Modernization				Modification Number / Title: 7 / CC011 - INTEGRATED SHIP CONTROLS (ISC)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	77.573	14.180	-	-	-	-	-	-	-	7.200	-	98.953
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	77.573	14.180	-	-	-	-	-	-	-	7.200	-	98.953
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	77.573	14.180	-	-	-	-	-	-	-	7.200	-	98.953
<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 Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procure and Install Smartship Integrated Ship Control (ISC) for CG Modernization.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0960 / CG Modernization					Modification Number / Title: 7 / CC011 - INTEGRATED SHIP CONTROLS (ISC)			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: CC011 - INTEGRATED SHIP CONTROLS (ISC)</i>													
B Kits													
Recurring													
1.1.1) CC011 - ISC EQUIPMENT - NonOrganic ⁽¹²⁾	6 / 38.485	2 / 13.220	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / 7.200	7 / -	17 / 58.905	
1.1.2) CC011 - ISC ENGINEERING SERVICES - NonOrganic	- / 12.771	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.771	
<i>Subtotal: Recurring</i>	<i>- / 41.256</i>	<i>- / 13.220</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 7.200</i>	<i>- / -</i>	<i>- / 61.676</i>	
<i>Subtotal: CC011 - INTEGRATED SHIP CONTROLS (ISC)</i>	<i>6 / 41.256</i>	<i>2 / 13.220</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1 / -</i>	<i>1 / 7.200</i>	<i>7 / -</i>	<i>17 / 61.676</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 41.256</i>	<i>- / 13.220</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 7.200</i>	<i>- / -</i>	<i>- / 61.676</i>	
Installation													
<i>Modification Item 1 of 1: CC011 - INTEGRATED SHIP CONTROLS (ISC)</i>													
<i>Subtotal: Installation</i>	<i>- / 36.317</i>	<i>- / 0.960</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 37.277</i>	
Total													
Total Cost (Procurement + Support + Installation)	77.573	14.180	-	-	-	-	-	-	-	7.200	-	98.953	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 7 / CC011 - INTEGRATED SHIP CONTROLS (ISC)

Modification Item 1 of 1: CC011 - INTEGRATED SHIP CONTROLS (ISC)

Manufacturer Information

Manufacturer Name: HENSCHTEL	Manufacturer Location: NEWBURY PORT, MA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 6

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jun 2016						Jan 2022
Delivery Dates	Dec 2016						Jan 2023

Installation Information

Method of Implementation: [none specified]:: Installation Name: CC011 - ISC EQUIPMENT

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 36.317	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 36.317
FY 2015	- / -	- / 0.960	- / -	- / -	- / -	- / -	1 / -	- / -	- / -	1 / -	- / -	2 / 0.960
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / -	1 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / -	7 / -
Total	6 / 36.317	- / 0.960	- / -	- / -	- / -	- / -	1 / -	- / -	- / -	1 / -	9 / -	17 / 37.277

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	9	17
Out	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	10	17

Footnotes:
⁽¹²⁾ FY 15 ISC procurements for the CG 63 USS Cowpens and CG 69 USS Vicksburg. Initial DSA costs were funded by SMOSF and will fund the SSRA in FY 16 for the CG 63 USS Cowpens and CG 64 USS Gettysburg. SMOSF funding will be provided to support installation, DSA, and LLTM for the CG 63 USS Cowpens in FY 18; and for the CG 69 USS Vicksburg in FY 21. FY 21 ISC procurement for CG66 USS Hue City will be funded with SMOSF.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 8 / CC015 - MULTI-MISSION SIGPRO
---	---	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	66.000	-	-	-	-	-	-	-	-	-	-	66.000
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	66.000	-	-	-	-	-	-	-	-	-	-	66.000
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	66.000	-	-	-	-	-	-	-	-	-	-	66.000
<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 Thousands)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Replaces existing AN/SPY-1B/B(V) MIL-STANDARD Signal Processor with the COTS Multi-Mission SIGPRO set.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 8 / CC015 - MULTI-MISSION SIGPRO

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> CC015 - MULTI-MISSION SIGPRO												
B Kits												
Recurring												
1.1.1) CC015 - MULTI-MISSION SIGPRO EQUIPMENT - Organic	- / 66.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 66.000
<i>Subtotal: Recurring</i>	- / 66.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 66.000
<i>Subtotal: CC015 - MULTI-MISSION SIGPRO</i>	- / 66.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 66.000
<i>Subtotal: Procurement, All Modification Items</i>	- / 66.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 66.000
Installation												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	66.000	-	-	-	-	-	-	-	-	-	-	66.000

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 8 / CC015 - MULTI-MISSION SIGPRO
Modification Item 1 of 1: CC015 - MULTI-MISSION SIGPRO		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0960 / CG Modernization				Modification Number / Title: 9 / CC016 - SPY-1B VARIANCE TRANSMITTER UPGRADES				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	30.780	-	-	-	-	-	-	-	-	-	-	30.780
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	30.780	-	-	-	-	-	-	-	-	-	-	30.780
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	30.780	-	-	-	-	-	-	-	-	-	-	30.780
<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 Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Provides upgrades to the existing Radio Frequency Monitor (RFM), existing Driver/Pre-Driver (DPD) and modifies existing Deckhouse Wave Guide.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 9 / CC016 - SPY-1B VARIANCE TRANSMITTER UPGRADES

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> CC016 - SPY-1B VARIANCE TRANSMITTER UPGRADES												
B Kits												
Recurring												
1.1.1) CC016 - SPY-1B VARIANCE TRANSMITTER EQUIPMENT - Organic	- / 30.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 30.780
<i>Subtotal: Recurring</i>	- / 30.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 30.780
<i>Subtotal: CC016 - SPY-1B VARIANCE TRANSMITTER UPGRADES</i>	- / 30.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 30.780
<i>Subtotal: Procurement, All Modification Items</i>	- / 30.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 30.780
Installation												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	30.780	-	-	-	-	-	-	-	-	-	-	30.780

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0960 / CG Modernization	Modification Number / Title: 9 / CC016 - SPY-1B VARIANCE TRANSMITTER UPGRADES

Modification Item 1 of 1: CC016 - SPY-1B VARIANCE TRANSMITTER UPGRADES

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: Marlborough, MA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 18

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

--	--	--	--	--	--	--	--

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment	P-1 Line Item Number / Title: 0970 / LCAC
---	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
<i>Procurement Quantity (Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gross/Weapon System Cost (\$ in Millions)</i>	92.924	7.380	15.125	3.090	-	3.090	5.468	24.156	5.710	20.830	-	174.683
<i>Less PY Advance Procurement (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Net Procurement (P-1) (\$ in Millions)</i>	92.924	7.380	15.125	3.090	-	3.090	5.468	24.156	5.710	20.830	-	174.683
<i>Plus CY Advance Procurement (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	92.924	7.380	15.125	3.090	-	3.090	5.468	24.156	5.710	20.830	-	174.683

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

<i>Initial Spares (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Flyaway Unit Cost (\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gross/Weapon System Unit Cost (\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The LCAC (Landing Craft Air Cushion) mission is to transport weapons systems, equipment, cargo, and personnel of the assault elements for the Marine Air/Ground Task Force from ship-to-shore and across the beach. The LCAC weighs 150 tons, is 88ft long with a beam of 47ft, rides on a cushion of air contained in a flexible skirt and is propelled by two aft-mounted, reversible, variable pitch propellers. It is capable of speeds in excess of 40 knots. The LCAC sustainment funding is programmed for equipment procurement using OPN to replace selected engines, personnel transport modules and propeller shrouds that the fleet urgently requires to maintain acceptable levels of readiness.

LC001 - LCAC SYSTEM UPGRADES

The LCAC System Upgrade Program provides for selected modernization through procurement and installation of components required to maintain acceptable levels of fleet operational readiness. Equipment removal and installation will take place at the two Assault Craft Units (ACUs), each of which are currently responsible for half of the craft inventory.

LC002 - ENGINES

The ETF-40B engines are enhanced versions of the current TF-40B engines and are being provided with the rest of the SLEP craft. Recent catastrophic engine failures have highlighted the need for spare engines to reduce operational downtime. Engine procurements are also for Pack Up Kits (PUKs) that accompany fleet deployment of LCACs aboard amphibious ships. Additional ETF 40B Engines will be needed for this purpose since they are being newly introduced as part of SLEP.

LC007 - LIGHTWEIGHT ARMOR

The portable lightweight armor system replaces the existing armor system. The portable system can be transported via a Container Express (CONEX) box and provides the Assault Craft Unit with the ability to provide ballistic/fragmentation protection to manned spaces on the craft as well as to selected machinery components.

LC008 - COLD WEATHER KITS

LCACs are required to operate in ambient temperatures as low as 10F. Snow and ice accumulation leads to actuation of a safety system that bypasses the main engine inlet air filtration system and allows engines to draw in unfiltered air. Cold weather kits prevent snow and ice accumulation in the main engines during cold weather operations.

LC009 - PERSONNEL TRANSPORT MODULE

The Personnel Transport Module (PTM) increases the capability of the Landing Craft Air Cushion (LCAC) to transport personnel and protect occupants from the elements inherent in an amphibious environment.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0970 / LCAC
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>LC010 - SSC FULL MISSION TRAINERS (FMT) Ship to Shore Connector (SSC) Full Mission Trainer (FMT) is a programmable simulator and is a fundamental element of SSC operator training. New SSC FMTs are required because LCAC FMTs will not support SSC crew training based on significant Command Module/C4N System differences.</p> <p>[P40A / LC001 LCAC SYSTEMS UPGRADE]: FY2016 reflects congressional reduction of \$5.840 million for LCAC systems upgrade excess growth</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0970 / LCAC

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	LCAC			- / 92.924	- / 7.380	- / 15.125	- / 3.090	- / -	- / 3.090
P-40	Total Gross/Weapon System Cost			- / 92.924	- / 7.380	- / 15.125	- / 3.090	- / -	- / 3.090

*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.

--

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0970 / LCAC **Aggregated Items Title:** LCAC

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) LCAC																				
1.1) LC001 LCAC SYSTEMS UPGRADE (1)	A		24,814K	2	49.627	736,000.00	3	2.208	730,000.00	11	8.030	-	-	-	-	-	-	-	-	
1.2) LC002 ETF 40-B ENGINES (2)	A		2,232K	17	37.950	1,558K	3	4.674	1,512K	2	3.024	1,490K	1	1.490	-	-	-	1,490K	1	1.490
1.3) LC007 LIGHTWEIGHT ARMOR	A		1,069K	5	5.347	249,000.00	2	0.498	217,750.00	4	0.871	-	-	-	-	-	-	-	-	
1.5) LC009 PERSONNEL TRANSPORT MODULE	A		-	-	-	-	-	-	800,000.00	4	3.200	800,000.00	2	1.600	-	-	-	800,000.00	2	1.600
Subtotal: 1) LCAC			-	-	92.924	-	-	7.380	-	-	15.125	-	-	3.090	-	-	-	-	-	3.090
Total			-	-	92.924	-	-	7.380	-	-	15.125	-	-	3.090	-	-	-	-	-	3.090

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

Footnotes:

(1) FY 2016 reflects congressional reduction of \$5.840 million for LCAC systems upgrade excess growth

(2) Recent catastrophic engine failures have highlighted the need for spare engines to reduce operational downtime. Engine procurements are also for Pack Up Kits (PUKs) that accompany fleet deployment of LCACs aboard amphibious ships. Additional ETF 40B Engines will be needed for this purpose since they are being newly introduced as part of SLEP.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0977 / Underwater EOD Programs

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 **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	122.952	58.576	51.652	24.350	-	24.350	53.589	43.416	44.072	45.466	-	444.073
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	122.952	58.576	51.652	24.350	-	24.350	53.589	43.416	44.072	45.466	-	444.073
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	122.952	58.576	51.652	24.350	-	24.350	53.589	43.416	44.072	45.466	-	444.073

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	14.957	6.075	1.786	-	1.786	3.674	1.640	1.958	1.994	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Underwater Explosive Ordnance Disposal (EOD) program supports EOD Groups, Units, and Detachments worldwide. This program supplies EOD and Maritime Expeditionary forces with the necessary allowance outfitting, and diving and diving-related equipment aligned to fulfill assigned missions that includes Expeditionary Mine Countermeasures (ExMCM) and other Maritime Expeditionary missions. Most equipment must have inherently low acoustic and magnetic signatures. The EOD program supports numerous Programs of Record (POR) and non PORs within this budget line item which includes the Marine Mammal Systems (MMS). The requirements for the procurement of each of these system suites are articulated in OPNAV approved requirements documents in accordance with DoD Directive 5000.2, SECNAVINST 5000.2E, and the JCIDS process as defined by C.JSCINST 3170.01. Additionally, the nature of the missions assigned to EOD and MCM forces under OPNAVINST 3501.97H, Required Operational Capabilities & Projected Operational Environments (ROC/POE), require an aggregated set of systems and equipment to perform the wide range of mine countermeasures, underwater detection, location, investigation, force protection, and neutralization tasks that comprise the mission set. The establishment of ExMCM Forces under the direction of Commander, US Fleet Forces Command has resulted in an increased inventory requirement for Underwater EOD systems and equipment, with a resultant requirement for re-aligned procurement and fielding priorities across the FYDP.

The acquisition strategy approved by the milestone decision authority reflects an evolutionary and modular approach to develop, test, procure, and field the types of baseline capabilities defined by this program with attendant preplanned product improvements and production engineering needed to improve and advance maintain these capabilities in ever changing dynamic underwater threat environments.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0977 / Underwater EOD Programs

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 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Underwater EOD Programs	P-5a, P-21		- / 122.952	- / 58.576	- / 51.652	- / 24.350	- / -	- / 24.350
P-40	Total Gross/Weapon System Cost			- / 122.952	- / 58.576	- / 51.652	- / 24.350	- / -	- / 24.350

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

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

Justification:
The FY 2017 funding request was reduced by \$800 thousand to account for the availability of prior year execution balances.

FY 2017 funding is required to procure Underwater EOD program systems and equipment to outfit Expeditionary MCM Companies, EOD and Mobile Salvage units with hardware required to accomplish their OPNAV approved Required Operational Capability and Projected Operational Environments. This equipment will allow warfighters to detect, locate, investigate, neutralize and render safe unexploded ordnance including improvised explosive devices.

Additionally, FY2017 funding is required to procure product improvements needed for systems designed and first produced over 40 years ago, as well as the production engineering and integrated logistics support needed for all Expeditionary MCM Companies, EOD Units, and Expeditionary Salvage units. If these forces are not properly outfitted lives may be lost, access to sea lanes of communication could be severed, and risk to transiting forces will be elevated.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy						Date: February 2016		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9			P-1 Line Item Number / Title: 0977 / Underwater EOD Programs			Item Number / Title [DODIC]: 1 / Underwater EOD Programs		
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:		
Resource Summary			Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Procurement Quantity (Units in Each)			-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)			122.952	58.576	51.652	24.350	-	24.350
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			122.952	58.576	51.652	24.350	-	24.350
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)			122.952	58.576	51.652	24.350	-	24.350
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>								
Initial Spares (\$ in Millions)			-	14.957	6.075	1.786	-	1.786
Gross/Weapon System Unit Cost (\$ in Dollars)			-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - UQ019-MINE WARFARE VULNERABILITY IDENTIFICATION PROGRAM (MIW-VIP) Cost																		
Recurring Cost																		
1.1.1) MIW-VIP ⁽¹⁾	-	-	1.540	-	-	0.334	-	-	0.299	-	-	0.304	-	-	-	-	-	0.304
<i>Subtotal: Recurring Cost</i>	-	-	1.540	-	-	0.334	-	-	0.299	-	-	0.304	-	-	-	-	-	0.304
<i>Subtotal: Hardware - UQ019-MINE WARFARE VULNERABILITY IDENTIFICATION PROGRAM (MIW-VIP) Cost</i>	-	-	1.540	-	-	0.334	-	-	0.299	-	-	0.304	-	-	-	-	-	0.304
Hardware - UQ034 - U/W EOD & MCM SYSTEM/EQUIPMENT Cost																		
Recurring Cost																		
2.1.1) MK 18 Mod 1 UUV ^{(†) (2)}	-	-	385,000.00	3	1.155	396,666.67	3	1.190	408,400.00	5	2.042	-	-	-	408,400.00	5	2.042	
2.1.2) MK 18 Mod 1 UCMC UUV Incremental (CIP) Retrofit Kit ^{(†) (3)}	-	-	1,060K	5	5.300	1,060K	5	5.300	1,060K	2	2.120	-	-	-	1,060K	2	2.120	
2.1.3) COCOM UUV MK 18 Mod 2	2,450K	4	9.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.1.4) UW DIVER INTEGRATION SENSORS ^{(†) (4)}	152,478.99	119	18.145	-	-	-	-	-	236,000.00	5	1.180	-	-	-	236,000.00	5	1.180	
2.1.5) ADVANCED FIRING SYSTEM ^{(†) (5)}	32,222.22	90	2.900	20,000.00	50	1.000	20,000.00	50	1.000	11,000.00	50	0.550	-	-	-	11,000.00	50	0.550

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Programs	Item Number / Title [DODIC]: 1 / Underwater EOD Programs

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

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2.1.6) HULS (Vehicle Procurement) ^(f)	541,000.00	4	2.164	553,000.00	4	2.212	-	-	-	-	-	-	-	-	-	-	-	-
2.1.7) HULS Retrofit Kits ^(f) (6)	-	-	-	149,500.00	6	0.897	150,230.77	13	1.953	177,000.00	12	2.124	-	-	-	177,000.00	12	2.124
2.1.8) MK 18 Mod 2 UUV ^(f) (7)	990,000.00	6	5.940	949,777.78	9	8.548	990,000.00	2	1.980	990,000.00	2	1.980	-	-	-	990,000.00	2	1.980
2.1.9) MK 18 Mod 2 Retrofit Kits ^(f)	1,750K	1	1.750	1,864K	4	7.455	1,812K	12	21.739	-	-	-	-	-	-	-	-	-
2.1.10) Auxilliary Equipment (HULS) ^(f)	286,000.00	4	1.144	286,000.00	1	0.286	-	-	-	-	-	-	-	-	-	-	-	-
2.1.11) Auxilliary Equipment (MK 18) ^(f)	378,000.00	9	3.402	364,950.00	20	7.299	386,000.00	4	1.544	381,333.33	3	1.144	-	-	-	381,333.33	3	1.144
2.1.13) UMCM/EOD UUV	-	-	15.150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.14) UMCM UUV INCREMENTAL (CIP) RETROFIT (BLKB) ⁽⁸⁾	1,318K	4	5.270	-	-	-	-	-	-	600,000.00	4	2.400	-	-	-	600,000.00	4	2.400
<i>Subtotal: Recurring Cost</i>	-	-	65.665	-	-	34.152	-	-	34.706	-	-	13.540	-	-	-	-	-	13.540
<i>Subtotal: Hardware - UQ034 - U/W EOD & MCM SYSTEM/EQUIPMENT Cost</i>	-	-	65.665	-	-	34.152	-	-	34.706	-	-	13.540	-	-	-	-	-	13.540
Hardware - UQ035 - OUTFIT EOD/UMCM TOOLS & EQUIPMENT Cost																		
Recurring Cost																		
3.1.1) UW INTEGRATED SYSTEM INTERFACE (PREVIOUSLY C4I UPGRADES) ⁽⁹⁾	-	-	1.023	-	-	0.222	-	-	0.226	-	-	0.250	-	-	-	-	-	0.250
<i>Subtotal: Recurring Cost</i>	-	-	1.023	-	-	0.222	-	-	0.226	-	-	0.250	-	-	-	-	-	0.250
<i>Subtotal: Hardware - UQ035 - OUTFIT EOD/UMCM TOOLS & EQUIPMENT Cost</i>	-	-	1.023	-	-	0.222	-	-	0.226	-	-	0.250	-	-	-	-	-	0.250
Hardware - UQ036 - DIVER SAFETY LIFE SUPPORT EQUIPMENT Cost																		
Recurring Cost																		
4.1.1) DIVER SAFETY LIFE SUPPORT EQUIPMENT	-	-	3.200	-	-	-	-	-	0.338	-	-	0.411	-	-	-	-	-	0.411
<i>Subtotal: Recurring Cost</i>	-	-	3.200	-	-	-	-	-	0.338	-	-	0.411	-	-	-	-	-	0.411

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0977 / Underwater EOD Programs **Item Number / Title [DODIC]:** 1 / Underwater EOD Programs

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

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
<i>Subtotal: Hardware - UQ036 - DIVER SAFETY LIFE SUPPORT EQUIPMENT Cost</i>	-	-	3.200	-	-	-	-	-	0.338	-	-	0.411	-	-	-	-	-	0.411
Hardware - UQ037 - MARINE MAMMAL SYSTEM/EQUIPMENT Cost																		
Recurring Cost																		
5.1.1) MMS UCMC	-	-	9.198	-	-	7.263	-	-	5.971	-	-	0.832	-	-	-	-	-	0.832
5.1.2) MMS ALLOWANCE ⁽¹⁰⁾	-	-	1.339	-	-	0.270	-	-	0.280	-	-	0.300	-	-	-	-	-	0.300
5.1.3) MEDICAL OUTFITTING	-	-	2.212	-	-	0.422	-	-	0.426	-	-	0.442	-	-	-	-	-	0.442
5.1.4) MMS ENVIRON PEN ASSEMBLIES	-	-	3.619	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.5) UW LOW MAGNETIC TEST EQUIPM UPGRADE	-	-	0.622	-	-	0.120	-	-	0.120	-	-	0.120	-	-	-	-	-	0.120
5.1.6) MMS CIP	-	-	2.446	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.7) MMS LITTORAL PORT & HARBOR DEFENSE OPERATIONS	-	-	3.871	-	-	1.456	-	-	1.506	-	-	0.217	-	-	-	-	-	0.217
<i>Subtotal: Recurring Cost</i>	-	-	23.307	-	-	9.531	-	-	8.303	-	-	1.911	-	-	-	-	-	1.911
Non Recurring Cost																		
5.2.1) MARINE MAMMAL SYSTEM (MMS) - MK 4, MK 6, MK 7, & MK 8 (OCO)	-	-	5.040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.2.2) MARINE MAMMAL SYSTEM (MMS) - MK 6 (OCO)	-	-	7.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	12.040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - UQ037 - MARINE MAMMAL SYSTEM/EQUIPMENT Cost</i>	-	-	35.347	-	-	9.531	-	-	8.303	-	-	1.911	-	-	-	-	-	1.911
Hardware - FY15 OCO SUPPLEMENTAL Cost																		
Non Recurring Cost																		
6.1.1) OCO FY15 (OEF-T)	-	-	-	-	-	8.210	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	8.210	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Programs	Item Number / Title [DODIC]: 1 / Underwater EOD Programs

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

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
<i>Subtotal: Hardware - FY15 OCO SUPPLEMENTAL Cost</i>	-	-	-	-	-	8.210	-	-	-	-	-	-	-	-	-	-	-	-
Support - UQ830 - PRODUCTION ENGINEERING Cost																		
7.1) PRODUCTION ENGINEERING ⁽¹¹⁾	-	-	8.390	-	-	3.723	-	-	4.108	-	-	4.253	-	-	-	-	-	4.253
<i>Subtotal: Support - UQ830 - PRODUCTION ENGINEERING Cost</i>	-	-	8.390	-	-	3.723	-	-	4.108	-	-	4.253	-	-	-	-	-	4.253
Support - UQ850 - PRODUCT IMPROVEMENT Cost																		
8.1) PRODUCT IMPROVEMENT ⁽¹²⁾	-	-	6.835	-	-	2.206	-	-	3.375	-	-	3.331	-	-	-	-	-	3.331
<i>Subtotal: Support - UQ850 - PRODUCT IMPROVEMENT Cost</i>	-	-	6.835	-	-	2.206	-	-	3.375	-	-	3.331	-	-	-	-	-	3.331
Support - UQTNG - INITIAL TRAINING Cost																		
9.1) INITIAL TRAINING ⁽¹³⁾	-	-	0.952	-	-	0.198	-	-	0.297	-	-	0.350	-	-	-	-	-	0.350
<i>Subtotal: Support - UQTNG - INITIAL TRAINING Cost</i>	-	-	0.952	-	-	0.198	-	-	0.297	-	-	0.350	-	-	-	-	-	0.350
Gross/Weapon System Cost	-	-	122.952	-	-	58.576	-	-	51.652	-	-	24.350	-	-	-	-	-	24.350

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

Footnotes:

- (1) CE 1.1.1 MIW-VIP: FY2017 efforts will focus on ranging RHIBS and unmanned systems to determine specific signature characteristics that will aid in development of tactics and procedures to ensure survivability of these systems in various operation conditions. MIW-VIP measures magnetic and acoustic signatures using existing ranges and portable ranges (Forward Area Combined Degaussing and Acoustic Range (FACDAR)). Measurements are taken in both home port areas and deployment areas to assess susceptibility to various threat mines. Efforts across the FYDP include ranging RHIBS, newly acquired equipment (related OPNAV approved Table of Allowance items) and unmanned systems (i.e. MK 18 Mod's 1 & 2).
- (2) CE 2.1.1 MK 18 Mod 1 UUV: Unit Cost (UC) increase of 3.85% (~\$11k per vehicle) due to the estimated increase in component material costs in the vehicle production line from FY 15 to FY 17.
- (3) CE 2.1.2 MK 18 Mod 1 UMCM UUV Incremental (CIP) Retrofit Kit: Unit cost of individual retrofit kits may vary based on the number and type of technologies included and systems being upgraded and are identified as incremental Block Upgrades (e.g., current increment Block C retrofit kit is an upgrade in capability for the Mk 18 Mod 1 UUV system).
- (4) CE 2.1.4 UW DIVER INTEGRATION SENSORS: Provides for the procurement of a family of systems based on Modified-Off-The Shelf (MOTS), mature technologies and upgrades to Diver Integrated Sensors. Unit cost of individual retrofit kits may vary based on number and type of technology included in the kit. FY 2017 funding supports the procurement of units to address obsolescence of the existing fleet inventory of the MK 15 Underwater Imaging System first fielded in 2004. This is the only sensor the EOD, Ex MCM and MDSU divers have to detect, locate and localize objects of interests including sea mines and underwater IEDs.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Programs	Item Number / Title [DODIC]: 1 / Underwater EOD Programs
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>(5) CE 2.1.5) ADVANCED FIRING SYSTEMS (AFS): FY 2017 will support the fielding of enhanced safety software for the fleet inventory of Mk 58 Acoustic Firing Devices. This enhancement will specifically address the requirement for a diver safe-separation distance when placing the MK 58 AFD against an underwater explosive threat. The Mk 12 AFS is the only approved command detonation firing train the EOD and Ex MCM diver has in their toolbox.</p> <p>(6) CE 2.1.7 HULS Retrofit Kits: FY 2015-17 funding will upgrade approved OPNAV inventory objectives with enhanced capabilities to include improved system navigation, higher resolution sonar, and graphical user interface enhancements based on S&T investments. HULS (MK-19)improvements leverage advancements in robotic manipulators, target recognition software, user interface, and explosive recognition and neutralization that have been achieved in land robots and which can now be integrated into undersea remotely operated vehicles. These upgrades will enable more rapid reacquisition, identification and neutralization of mine like targets found by the MK 18 or other MCM search assets.</p> <p>(7) CE 2.1.8 MK 18 Mod 2: Provides for procurement of UUV MK 18 Mod 2 systems and retrofit kits for fielding advanced sensor technology upgrades, which will is employed in operational missions in Shallow Water (SW) and Very Shallow Water (VSW) environments including rotational deployments to the Fifth Fleet area of responsibility. Unit costs of the advanced sensor retrofit kits can vary based on the number and type of sensor upgrades.</p> <p>(8) CE 2.1.14)UUV INCREMENTAL CAPABILITY IMPROVEMENT PROGRAM RETROFIT KITS (MK18/HULS): For MK 18, FY2017 funding levels are driven by fielding enhanced capabilities to address high priority threats IAW theater threat assessments. Specifically, MK 18 advanced sensors to detect, classify and locate in-volume targets will be procured in FY2017 based on validated test and evaluation results. FY2017 resources will also be used to upgrade the MK 19 HULS with the following enhanced capabilities: system navigation, sonar and graphical user interface enhancements based on S&T investments. This improved sonar will detect, classify and localize UW IEDs as well as provide improved system navigation for all fleet MK 19 systems.</p> <p>(9) CE 3.1.1. UNDERWATER (UW) INTEGRATED SYSTEM INTERFACE (previously - C4I UPGRADES): FY2017 resources support the upgrade of COIN (Common Operator Interface, Navy, a graphical user interface) to interoperate with the MK 18 Family of Systems and the advanced sensors. COIN upgrades resourced in FY2017 will ensure interoperability with legacy MCM assets and that the fielding of the advanced sensors will meet interoperability performance requirements.</p> <p>(10) CE 5.1.2) MARINE MAMMAL SYSTEM/EQUIPMENT: MMS ALLOWANCE: FY2017 funding supports outfitting of tools/equipment for all Fleet MMS in accordance with CNO approved allowance list. MK 7 MMS provides the USN's only buried mine hunting capability. Additionally, FY2017 funding will procure Medical Outfitting equipment required to meet statutory requirements</p> <p>(11) CE 2.7 Production Engineering: FY2017 funding supports the increased production of MK 18 and MK 19 Family of Systems requiring additional production support to include production contract award, first article tests, and factory acceptance tests.</p> <p>(12) CE 2.8 Product Improvement: Provides for engineering services to improve fielded MMS Systems/EOD Diver-based and unmanned systems to improve Human Systems Integration (HSI)/Logistics domains insert technology refresh and/or decrease costs. FY2017 resources in the PIP line will support increases in fleet inventories and the additional Engineering Change Proposals received based on lessons learned from extended fleet employment in the US Fifth Fleet, and the resultant expansion of mission applications</p> <p>(13) CE 9.1) INITIAL TRAINING FY 2017 funding provides resources needed due to the increase in training requirements due to expanded employment of fleet systems (i.e. mainly MK 18 and MK 19 Family of Systems) and increased inventory objectives. This training is required based on execution of acquisition programs, ECPs and product improvements.</p>		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9			P-1 Line Item Number / Title: 0977 / Underwater EOD Programs					Item Number / Title [DODIC]: 1 / Underwater EOD Programs				
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
2.1.1) MK 18 Mod 1 UUV		2015	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIH, MD	Mar 2015	Mar 2016	3	385,000.00	Y		
2.1.1) MK 18 Mod 1 UUV		2016	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIH, MD	Oct 2015	Oct 2016	3	396,666.67	Y		
2.1.2) MK 18 Mod 1 UCMC UUV Incremental (CIP) Retrofit Kit ^(†)		2015	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIHD, MD	Nov 2014	Nov 2015	5	1,060K	Y		
2.1.2) MK 18 Mod 1 UCMC UUV Incremental (CIP) Retrofit Kit ^(†)		2016	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIHD, MD	Mar 2016	Mar 2017	5	1,060K	Y		
2.1.4) UW DIVER INTEGRATION SENSORS		2014	UARC-University of Texas at Austin / Austin, TX	C / FFP	NSWCIHD, MD	May 2014	May 2015	27	132,888.89	Y		
2.1.4) UW DIVER INTEGRATION SENSORS		2017	UARC-University of Texas at Austin / Austin, TX	C / FFP	** NO PCO **	Oct 2016	Oct 2016	5	236,000.00	Y		
2.1.5) ADVANCED FIRING SYSTEM		2014	UARC-University of Texas at Austin / Austin, TX	C / FFP	NAVSEA, HQ	May 2014	May 2015	50	20,000.00	Y		
2.1.5) ADVANCED FIRING SYSTEM		2015	UARC-University of Texas at Austin / Austin, TX	C / TBD	NAVSEA, HQ	Apr 2015	Apr 2016	50	20,000.00	Y		
2.1.5) ADVANCED FIRING SYSTEM		2016	UARC-University of Texas at Austin / Austin, TX	C / TBD	NAVSEA, HQ	May 2016	May 2017	50	20,000.00	Y		
2.1.6) HULS (Vehicle Procurement)		2014	Bluefin Robotics / Quincy, MA	C / FFP	NSWCIHD, MD	Mar 2014	Mar 2015	4	541,000.00	Y		
2.1.6) HULS (Vehicle Procurement)		2015	Bluefin Robotics / Quincy, MA	C / FFP	NSWCIHD, MD	Oct 2014	Oct 2015	4	553,000.00	Y		
2.1.7) HULS Retrofit Kits		2015	Bluefin / Maine	C / FFP	NSWCIHD, MD	Mar 2015	Mar 2016	6	149,500.00	Y		
2.1.7) HULS Retrofit Kits		2016	Bluefin / Maine	C / FFP	NSWCIHD, MD	Mar 2016	Mar 2017	13	150,230.77	Y		
2.1.7) HULS Retrofit Kits		2017	Bluefin / Maine	C / FFP	NSWCIHD, MD	Mar 2017	Mar 2018	12	177,000.00	Y		
2.1.8) MK 18 Mod 2 UUV		2014	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIH, MD	Mar 2014	Mar 2015	6	990,000.00	Y		
2.1.8) MK 18 Mod 2 UUV		2015	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIH, MD	Mar 2015	Mar 2016	9	949,777.78	Y		
2.1.8) MK 18 Mod 2 UUV		2016	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIH, MD	Mar 2016	Mar 2017	2	990,000.00	Y		
2.1.9) MK 18 Mod 2 Retrofit Kits ^(†)		2014	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIH, MD	Mar 2014	Mar 2015	1	1,750K	Y		
2.1.9) MK 18 Mod 2 Retrofit Kits ^(†)		2015	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIHD, MD	Nov 2014	Nov 2015	4	1,864K	Y		
2.1.9) MK 18 Mod 2 Retrofit Kits ^(†)		2016	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIHD, MD	Nov 2015	Aug 2016	12	1,812K	Y		
2.1.10) Auxilliary Equipment (HULS)		2014	Bluefin / Maine	C / FFP	NSWCIH, MD	Mar 2014	Mar 2015	4	286,000.00	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Programs	Item Number / Title [DODIC]: 1 / Underwater EOD Programs
---	--	--

Cost Elements	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
2.1.10) Auxilliary Equipment (HULS)		2015	Bluefin / Maine	C / FFP	NSWCIH, MD	Oct 2014	Oct 2015	1	286,000.00	Y		
2.1.11) Auxilliary Equipment (MK 18)		2014	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIH, MD	Mar 2014	Mar 2015	9	378,000.00	Y		
2.1.11) Auxilliary Equipment (MK 18)		2015	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIH, MD	Mar 2015	Mar 2016	20	364,950.00	Y		
2.1.11) Auxilliary Equipment (MK 18)		2016	Hydroid, Inc./Kongsberg Maritime / Cape Cod, MA	C / FFP	NSWCIH, MD	Apr 2016	Apr 2017	4	386,000.00	Y		

^(†) indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Programs	Item Number / Title [DODIC]: 1 / Underwater EOD Programs
---	--	--

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2014												Fiscal Year 2015												BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014												Calendar Year 2015												
							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
2.1.2) MK 18 Mod 1 UMCM UUV Incremental (CIP) Retrofit Kit ⁽³⁾																															
1		2015	NAVY	5	-	5																							5		
1		2016	NAVY	5	-	5																							5		
2.1.9) MK 18 Mod 2 Retrofit Kits																															
2		2014	NAVY	1	-	1																							-		
2		2015	NAVY	4	-	4																							4		
2		2016	NAVY	12	-	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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Programs	Item Number / Title [DODIC]: 1 / Underwater EOD Programs
---	--	--

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2016												Fiscal Year 2017												BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017												
							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
2.1.2) MK 18 Mod 1 UMCM UUV Incremental (CIP) Retrofit Kit ⁽³⁾																															
1		2015	NAVY	5	-	5	-	1	-	1	-	1	-	1	-														-		
1		2016	NAVY	5	-	5																							1		
2.1.9) MK 18 Mod 2 Retrofit Kits																															
2		2014	NAVY	1	1	-																							-		
2		2015	NAVY	4	-	4	-	1	-	1	-	1	-	1	-														-		
2		2016	NAVY	12	-	12		A	-	-	-	-	-	-	-	-	1	-	2	-	2	-	-	2	2	2	1		-		
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0977 / Underwater EOD Programs **Item Number / Title [DODIC]:** 1 / Underwater EOD Programs

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												BALANCE	
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
2.1.2) MK 18 Mod 1 UMCM UUV Incremental (CIP) Retrofit Kit ⁽³⁾																															
1		2015	NAVY	5	5	-																								-	
1		2016	NAVY	5	4	1	-		1																					-	
2.1.9) MK 18 Mod 2 Retrofit Kits																															
2		2014	NAVY	1	1	-																								-	
2		2015	NAVY	4	4	-																								-	
2		2016	NAVY	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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0977 / Underwater EOD Programs	Item Number / Title [DODIC]: 1 / Underwater EOD Programs
---	--	--

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	Hydroid, Inc./Kongsberg Maritime - Cape Cod, MA	-	-	-	-	-	-	-	-	-	-	-	-
2	Hydroid, Inc./Kongsberg Maritime - Cape Cod, MA	-	-	-	-	-	-	-	-	-	-	-	-

"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).

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0981 / Items less than \$5 Million

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	422.465	70.512	95.349	88.719	-	88.719	110.036	82.299	63.143	62.951	19.280	1,014.754
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	422.465	70.512	95.349	88.719	-	88.719	110.036	82.299	63.143	62.951	19.280	1,014.754
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	422.465	70.512	95.349	88.719	-	88.719	110.036	82.299	63.143	62.951	19.280	1,014.754

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	0.093	0.183	-	-	-	-	-	-	-	-	0.276
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget provides for "S" cognizance (Shipboard, Hull, Mechanical & Electrical (HM&E) equipment for submarines, surface ships, and aircraft carriers) which are not in any specific category. This equipment accomplishes program alterations for installation during CNO and Fleet availabilities, fills Fleet requisitions from casualties and attrition, provide tech refresh upgrades, and replaces obsolete equipment. Primary objectives are to maintain or improve readiness, safety, reliability, reduce workload, lower maintenance costs, improve sailor quality of life, and/or sustain ship classes through their notional life or beyond. The budget purchases install various equipment including machinery pumps, generators, ships propellers and shafts, air compressors, davits, A/C Plants, and steam propulsion items. It also procures allowance items as required by the Coordinated Shipboard Allowance List (COSAL). Major programs are the CVN Class Machinery Plant Upgrades, MACHALTs, Carrier Auto Voltage Regulator (AVR), Solid State Lighting, Patrol Coastal Modernization, and Expeditionary Mobile Base (ESB).

[P40A / LT040 - AEC]: LT040 - AEC (ASSESSMENT OF EQUIPMENT CONDITION)

This supports the implementation of Condition Based Maintenance (CBM) by providing work package validation for HM&E systems, pre-deployment HM&E systems condition assessment, on the job training and repair assistance to ships during TYCOM's TARGET process. These funds are for the outfitting and periodic replacement of the AEC team's Test Measurement and Diagnostic Equipment (TMDE) inventories, to provide deckplate diagnostic capability to improve the quality of AEC's process and products, and to leverage technology to streamline the visit process.

[P40A / LT060 - MACHALts]: The Machinery Alteration Program (MACHALT) supports identification, procurement, and installation of Hull, Mechanical and Electrical (HM&E) equipment and system improvements on in-service ships. The components are required to support units in the Fleet during the Continuous Maintenance Availability (CMAV) and other windows of opportunity. Due to Fleet usage requirements, and alignment of availability periods in a given year, adjustments are made to quantities and items throughout the FYDP. Program execution improves system readiness and life cycle cost. MACHALts are installed via the Ship Maintenance (SHIPMAIN) process in the following priority order: (1) Mandatory Safety, (2) Statutory, and (3) Troubled Systems/Obsolescence Alts.

[P40A / LT110 - Propellers and Shafts]: LT110- VARIOUS PROPELLERS AND SHAFTS This funding procures spare waterborne shafting (propeller shafts and stern tube shafts) and controllable pitch propeller (CPP) system end items such as propeller blades, hubs and oil distribution (OD) boxes used on DDG 51 class ships. These spares are required to meet DDG 51 class Fleet demand due to scheduled replacement caused by lifecycle wear and unscheduled replacements caused by CASREPs. The component have long repair turn-around times (1-2 years) and thus cannot be repaired and reused during an availability. The technical requirements and drydocking constraints drives the program to establish a rotatable pool to support replacements. The growing size of the DDG 51 class is driving the requirement to increase the number of spares to support a rotatable pool and ensure readiness. A malfunctioning propeller or shaft may result in excessive vibration, which could lead to damage of ship structures and equipment (bearings, main reduction gears, and bulkhead seal), increase of ship cavitation/noise, loss of speed or loss of motion.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0981 / Items less than \$5 Million
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>LT110 Item 3, Procurement cost for FY17 cost elements 3.1-3.3 reflect vendor cost increases based on prior year procurements.</p> <p>[P40A / LT120 - Carrier Propulsion Plant Inspection]: Funds will be utilized to procure the latest technology inspection system tooling, i.e., laser-optic, ultrasonic, fiber-optic, electro-optic and computed radiography inspection systems.</p> <p>[P40A / LT130 - Steam Propulsion Items]: LT130 - STEAM PROPULSION ITEMS This provides for several initiatives oriented to upgrading boiler efficiency and safety with downstream maintenance effectiveness. In particular, the items procured include: Upgraded Stack Gas Analyzer (SGA) , Optimization Trim Loop Material including fuel oil meters, stack gas temperature sensors, electronic automatic boiler controls interface software/schema to improve steam plant efficiency, Upgraded electronic automatic boiler control (E-ABC) system process controllers/smart transmitters, Upgraded Boiler Water/Feedwater (BW/FW) Chemistry Analysis/Carbohydrazide Implementation Equipment., Upgraded SSTG Protective Devices (Overspeed Trips), and Upgrades to Boiler Igniter System (BIS) (Fuel Valve and Insert/Retract Air Actuators). The Steam Propulsion Improvement Program provides safe and reliable power for ship movement through the water, and, in addition, provides power to ships combat and habitability systems, whether electrical or steam dependent. At any given time, due to propulsion plant casualties, ship propulsion systems may be operating at reduced capability, adversely affecting the ship's mission(s). The Steam Propulsion improvement program encompasses steam and diesel propulsion surface ships in the Fleet, and provides for material upgrades to propulsion systems resulting in increased readiness, safety and reliability. Items can be installed during a scheduled or unscheduled availability by a shipyard, tender/ Intermediate Maintenance Activity or Alteration Installation Team (AIT).</p> <p>[P40A / LT830 - Carrier Production Engineering]: The review and approval of any production contract technical documentation, or the separate development of this documentation, to include: Technical Manuals, Planned Maintenance System (PMS), Level III Production Drawings, Provisioning Technical Documentation (PTD), Program Support Data (PSD), and Allowance Parts List (APL); engineering support for final design reviews.</p> <p>[P40A / Moonpool Launch and Recovery Sys (MLARS)]: Moonpool Launch and Recovery SYS (MLARS)- (BSO 60) The Moonpool Launch and Recovery System (MLARS) is a system integrated into the USNS MAURY (T-AGS 66) that allows launch and recovery of Autonomous Underwater Vehicles (AUVs) and other systems through an 18' x 18' moonpool located within the ship's Staging Bay. The MLARS also provides an overhead crane system to safely maneuver the systems within the Staging Bay prior to deployment and after recovery. The MLARS allows underwater systems to be deployed from within the ship in a clandestine manner."</p> <p>[P40A / LT325 - Propulsion Shafting]: Establishes a holistic shafting program that provides program management and life cycle support for Carrier propulsion shafting. Purchases the two intermediate shaft segments to complete the CVN rotatable pool of shafting. Purchases the couplings required to make the shaft segments ready for install. Several CVNs had docking periods extended because the time required to overhaul existing shafts did not meet project milestones. To rectify the issue, program management of CVN shafts was assigned to PMS312. PMS312 stood up a partial pool of "ready for issue" CVN shafts using existing carcasses and refurbished removals from decommissioned ships. Using existing funds to overhaul existing carcasses, a pool of over 12 segments was built. Funding required for 2 additional segments that are required to meet Shipyard requirements. No carcasses exist to meet this need; therefore these two shaft segments will be purchased new along with ancillary material (couplings) required for installation.</p> <p>[P40A / LT326 - Training Test Equipment]: Through the Technical Training Audit Program (TTAP) it has been found that the vast majority of lifecycle Hull, Mechanical and Electrical (HM&E) courses of instruction do not teach to current Fleet configurations, have obsolete or non-existent training equipment and do not utilize current training technology where appropriate. Funding required to replace outmoded and obsolete Training Test Equipment in established Navy schools, as identified in approved or draft Navy Training System Plans (NTSPs).</p> <p>[P40A / LT328 - Mobile Cleaning Recovery and Recycle System (MCRRS)]: The Mobile Cleaning, Recovery & Recycling System (MCRRS) is a shipboard, heavy duty, self-powered, and propelled cleaning vehicle. It utilizes pressurized water jet technology, and a water reclaiming / recycling system onboard the unit to clean and restore coefficient of friction on non-skid surfaces for Navy aircraft capable ships. MCRRS will replace the existing obsolete Tennant flight deck scrubber, significantly reduce manpower allocation and materials required to conduct the manual cleaning process utilizing soap and water, and be fielded on all LHA and LHD platforms. In 2014 the CNO initiated support of MCRRS as part of the Flight Deck Scrubber (FDS) Materiel Solution. OPNAV N9 funded the effort via an ATR in FY15 to begin program integration efforts for production design, finalizing requirements, and to initiate four MCRRS procurements.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0981 / Items less than \$5 Million
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P3A / LT160 - Machinery Plant Upgrades]: LT160 - MACHINERY PLANT UPGRADES (INTEGRATED COMMUNICATIONS AND ADVANCED NETWORK (ICAN)) ICAN provides core infrastructure (node rooms, air blown fiber optic cable plant, network services) for integrating voice, video and data systems. This capability is easily upgradeable for rapid and cost effective expansion to support new technologies, such as IT-21, and is compatible with the Navy's integrated Information Networks MOA.</p> <p>[P3A - 2 / LT306 - Automated Voltage Regulator (AVR)]: LT306 - AUTOMATED VOLTAGE REGULATOR The CVN Automatic Voltage Regulator (AVR) is a microprocessor based voltage regulator system for the NIMITZ Class, programmed to replace the legacy analog voltage regulator, which, although operational, lacks the improved reliability and lower maintenance costs of the AVR. It controls the output voltage of a turbine generator (TG), which converts steam into the electricity used for aircraft and combat operations, and reactor cooling.</p> <p>[P3A - 3 / LT307 - Carrier Canned Lube Oil Pump]: The Canned Lube Oil Pump (CLOP) with a two-speed motor will replace both the Standby Lube Oil Pump (SLOP) and Emergency Lube Oil Pump (ELOP) on all CVN-68 Class ships. The ships have repeatedly overhauled SLOPs to replace turbine and reduction gear parts as well as replacing leaking mechanical seals at excessive costs. The ELOPs are also regularly overhauled to replace leaking mechanical seals. In addition, the installed ELOP does not meet all operational requirements for a Lube Oil System. The motor and pump are an integral piece on the CLOP which alleviates any alignment issues and a mechanical seal is no longer required.</p> <p>[P3A - 4 / LT308 - LHD/LHA Davits]: LT308 - LHD/LHA Davit Funding provides for the procurement of Rigid Inflatable Boat (RIB) Davits for LHA and LHD Class Ships. These allow ships to utilize Navy Standard 11M RIBs which replace antiquated Landing Craft Personnel (LCPL) boats which are no longer supported and present a maintenance burden, reduction in operational availability and jeopardize ships' ability to perform Anti-Terrorism Force Protection (ATFP) missions.</p> <p>[P3A - 5 / LT309 - Solid-State Lighting (SSL)]: LT309- SOLID-STATE LIGHTING (SSL) FIXTURES Solid State Lighting refers to a type of lighting that uses semiconductor Light-Emitting Diodes (LEDs), Organic Light-Emitting Diodes (OLEDs), or Polymer Light-Emitting Diodes (PLEDs) as sources of illumination rather than electrical filaments, plasma (used in arc lamps such as fluorescent lamps) or gas. Funds provide for replacement of fluorescent and incandescent lighting fixtures installed on Amphibious Class ships with a Solid-State Lighting (SSL) fixtures.</p> <p>[P3A - 7 / LT316 - Patrol Coastal ECDIS]: LT316 - PATROL COASTAL MODERNIZATION The PC Sustainment Program provides necessary modifications and upgrades to keep PC 1 class ships in-service and supportable through their expected service lives (until 2025). Upgrades include Navigation upgrades, Electronic Chart Display and Information System-Navy (ECDIS-N) upgrades, and Forward Looking Infrared (FLIR) upgrades. FY16 increase due to the Navigator of the Navy direction, that all ships must be paperless by the end of FY16.</p> <p>[P3A - 10 / LT318 - Carriers Passive Countermeasures System (PCMS)]: classified effort</p> <p>[P3A - 12 / FMP Ship Units - LSD Davit]: LT322 - LSD Davit Provide Davit capabilities to meet the new OPNAV LSD boat requirement for two 11M Rigid Hull Inflatable Boats (RHIBs). Previous requirement was one 7M RHIB and one 11M RHIB. New Davit provides RHIB Launching Capability that meets Mandatory Safety of Life At Sea (SOLAS), Force Protection and Mission Requirements (Amphibious Assault; Anti-Piracy; Visit, Board, Search, and Seizure (VBSS)).</p> <p>[P3A - 13 / LT321 ESB SOF Backfit]: Funds provided for the review and approval of any production contract technical documentation, or the separate development of this documentation, to include: Technical Manuals, Planned Maintenance System (PMS), Level III Production Drawings, Provisioning Technical Documentation (PTD), Program Support Data (PSD), and Allowance Parts List (APL), engineering support for final design reviews, and procurement of Special Operation Forces (SOF) backfit items. These items include communication enhancements, aviation plus-ups, night vision compatibility, medical support items, MOGAS capability, and additional storage.</p> <p>[P3A - 14 / LT327 - Modular Refrigeration System.]: Modular Refrigeration System (MRS) replaces the existing legacy ship's stores refrigeration system (SSRS) onboard CVN68 class carriers. The legacy system is energy inefficient, space inefficient, and maintenance intensive, requiring highly skilled personnel to operate and maintain acceptable box temperatures. Most hardware associated with the legacy systems is specialized mil-spec and is either becoming unsupportable due to obsolescence, or is grossly expensive to maintain. Each MRS is comprised of a Modular Refrigeration Unit (MRU), an operating/diagnostic</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0981 / Items less than \$5 Million
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>control panel, and small chilled water cooled flat-plate condenser. There are 15 MRUs required per hull. MRS's are self-contained hatchable MRUs with a dedicated control panel that eliminate 90% of current maintenance requirements and require minimal operator support/training.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0981 / Items less than \$5 Million

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Items Less than \$5M Programs	P-5a		- / 127.730	- / 17.759	- / 14.415	- / 16.465	- / -	- / 16.465
P-3a	1 / LT160 - Machinery Plant Upgrades (TBD)			- / 162.485	- / 19.484	- / 10.305	- / 23.743	- / -	- / 23.743
P-3a	2 / LT306 - Automated Voltage Regulator (AVR) (TBD)			- / 45.884	- / 5.130	- / -	- / 2.600	- / -	- / 2.600
P-3a	3 / LT307 - Carrier Canned Lube Oil Pump (TBD)			- / 18.128	- / 6.017	- / -	- / -	- / -	- / -
P-3a	4 / LT308 - LHD/LHA Davits (TBD)			- / 15.425	- / 1.332	- / 2.615	- / 3.455	- / -	- / 3.455
P-3a	5 / LT309 - Solid-State Lighting (SSL) (TBD)			- / 15.742	- / 3.401	- / 2.888	- / 1.912	- / -	- / 1.912
P-3a	6 / LT314 - Carrier Oil Water Separator (TBD)			- / 0.000	- / 1.749	- / 6.223	- / 1.600	- / -	- / 1.600
P-3a	7 / LT316 - Patrol Coastal ECDIS (TBD)			- / 4.783	- / 1.574	- / 3.831	- / 0.395	- / -	- / 0.395
P-3a	8 / LT316 - Patrol Coastal Navigation Upgrade (TBD)			- / 6.132	- / 0.422	- / 5.586	- / 0.640	- / -	- / 0.640
P-3a	9 / LT316 - Patrol Coastal FLIR (TBD)			- / 2.330	- / -	- / 1.770	- / 2.528	- / -	- / 2.528
P-3a	10 / LT318 - Carriers Passive Countermeasures System (PCMS) (TBD)			- / 23.826	- / 11.290	- / 21.110	- / 20.200	- / -	- / 20.200
P-3a	11 / LT319 - JSF Support - Heavy Unrep (TBD)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-3a	12 / LT322 - LSD Boat Davit (TBD)			- / 0.000	- / 2.355	- / 7.058	- / 9.069	- / -	- / 9.069
P-3a	13 / LT321 ESB SOF Backfit (TBD)			- / 0.000	- / -	- / 19.547	- / 2.712	- / -	- / 2.712
P-3a	14 / LT327 - Modular Refrigeration System. (TBD)			- / 0.000	- / -	- / -	- / 3.400	- / -	- / 3.400
P-40	Total Gross/Weapon System Cost			- / 422.465	- / 70.512	- / 95.349	- / 88.719	- / -	- / 88.719

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Items Less than \$5M Programs	P-5a		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / LT160 - Machinery Plant Upgrades (TBD)			- / 20.896	- / 16.793	- / 20.282	- / 30.425	- / -	- / 304.413
P-3a	2 / LT306 - Automated Voltage Regulator (AVR) (TBD)			- / 0.300	- / 1.855	- / -	- / -	- / 8.100	- / 63.869
P-3a	3 / LT307 - Carrier Canned Lube Oil Pump (TBD)			- / 2.950	- / 6.750	- / -	- / -	- / -	- / 33.845
P-3a	4 / LT308 - LHD/LHA Davits (TBD)			- / 6.286	- / 0.395	- / 3.319	- / -	- / -	- / 32.827
P-3a	5 / LT309 - Solid-State Lighting (SSL) (TBD)			- / 1.990	- / 6.973	- / 4.099	- / 6.180	- / -	- / 43.185
P-3a	6 / LT314 - Carrier Oil Water Separator (TBD)			- / 5.000	- / 6.200	- / 6.800	- / 1.600	- / 3.200	- / 32.372
P-3a	7 / LT316 - Patrol Coastal ECDIS (TBD)			- / -	- / -	- / -	- / -	- / -	- / 10.583
P-3a	8 / LT316 - Patrol Coastal Navigation Upgrade (TBD)			- / -	- / -	- / -	- / -	- / -	- / 12.780
P-3a	9 / LT316 - Patrol Coastal FLIR (TBD)			- / -	- / -	- / -	- / -	- / 1.680	- / 8.308
P-3a	10 / LT318 - Carriers Passive Countermeasures System (PCMS) (TBD)			- / 23.225	- / 19.450	- / 3.400	- / -	- / -	- / 122.501
P-3a	11 / LT319 - JSF Support - Heavy Unrep (TBD)			- / 0.838	- / 3.045	- / 3.045	- / 2.207	- / 6.300	- / 15.435
P-3a	12 / LT322 - LSD Boat Davit (TBD)			- / 8.817	- / 6.743	- / 6.798	- / 9.079	- / -	- / 49.919
P-3a	13 / LT321 ESB SOF Backfit (TBD)			- / 22.300	- / -	- / -	- / -	- / -	- / 44.559
P-3a	14 / LT327 - Modular Refrigeration System. (TBD)			- / 4.267	- / -	- / -	- / -	- / -	- / 7.667

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0981 / Items less than \$5 Million

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>
P-40	Total Gross/Weapon System Cost			- / 110.036	- / 82.299	- / 63.143	- / 62.951	- / 19.280	- / 1,014.754

*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.

--

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy															Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										Aggregated Items Title:					
1810N / 01 / 9					0981 / Items less than \$5 Million										Items Less than \$5M Programs					
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) LT040 - AEC																				
1.1) AEC	A		-	-	2.832	-	-	0.199	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 1) LT040 - AEC			-	-	2.832	-	-	0.199	-	-	-	-	-	-	-	-	-	-	-	
2) LT060 - Machalts																				
2.1) Machalts (Amphibs)	A		-	-	15.831	-	-	0.515	-	-	0.560	-	-	0.293	-	-	-	-	-	0.293
2.2) Machalts (Surface Ships)	A		-	-	58.488	-	-	5.487	-	-	8.359	-	-	5.520	-	-	-	-	-	5.520
Subtotal: 2) LT060 - Machalts			-	-	74.319	-	-	6.002	-	-	8.919	-	-	5.813	-	-	-	-	-	5.813
3) LT110 - Propellers and Shafts ⁽¹⁾																				
3.1) Blade Set Port/STBD, DDG 51 CL (2)(†)	B		503,000.00	1	0.503	-	-	-	630,000.00	1	0.630	930,500.00	2	1.861	-	-	-	930,500.00	2	1.861
3.2) Hub Port DDG51 CL (†)	A		795,000.00	3	2.385	1,011K	1	1.011	875,000.00	1	0.875	1,016K	1	1.016	-	-	-	1,016K	1	1.016
3.3) Hub STBD DDG51 CL (†)	A		894,500.00	8	7.156	-	-	-	875,000.00	1	0.875	1,016K	1	1.016	-	-	-	1,016K	1	1.016
3.4) Prop Shaft DDG51 CL (†)	A		1,562K	7	10.931	-	-	-	1,437K	1	1.437	-	-	-	-	-	-	-	-	-
3.5) Stern Tube DDG51 CL (†)	A		1,088K	9	9.788	1,193K	2	2.386	1,181K	1	1.181	-	-	-	-	-	-	-	-	-
3.6) Oil Distribution (OD) Box, STBD DDG 51 CL CPP	A		230,416.67	12	2.765	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.7) Oil Distribution (OD) Box, Port DDG 51 CL CPP	A		214,600.00	5	1.073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) LT110 - Propellers and Shafts			-	-	34.601	-	-	3.397	-	-	4.998	-	-	3.893	-	-	-	-	-	3.893
4) LT120 - Carrier Propulsion Plant Inspection																				
4.1) Propulsion Plant Inspection	A		-	-	1.203	-	-	0.170	-	-	0.170	-	-	0.170	-	-	-	-	-	0.170
Subtotal: 4) LT120 - Carrier Propulsion Plant Inspection			-	-	1.203	-	-	0.170	-	-	0.170	-	-	0.170	-	-	-	-	-	0.170
5) LT130 - Steam Propulsion Items																				
5.1) Steam Propulsion Items	A		-	-	2.097	-	-	0.211	-	-	0.288	-	-	0.249	-	-	-	-	-	0.249
Subtotal: 5) LT130 - Steam Propulsion Items			-	-	2.097	-	-	0.211	-	-	0.288	-	-	0.249	-	-	-	-	-	0.249
6) LT830 - Carrier Production Engineering																				
6.1) Production Engineering	A		-	-	0.278	-	-	0.040	-	-	0.040	-	-	0.040	-	-	-	-	-	0.040

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0981 / Items less than \$5 Million **Aggregated Items Title:** Items Less than \$5M Programs

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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: 6) LT830 - Carrier Production Engineering			-	-	0.278	-	-	0.040	-	-	0.040	-	-	0.040	-	-	-	-	-	0.040
7) PC HVAC Upgrade																				
7.1) PC HVAC Upgrade	A		1,550K	8	12.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 7) PC HVAC Upgrade			-	-	12.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8) Moonpool Launch and Recovery Sys (MLARS)																				
8.1) Moonpool Launch & Recovery Sys ^(†)	A		-	-	-	4,200K	1	4.200	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 8) Moonpool Launch and Recovery Sys (MLARS)			-	-	0.000	-	-	4.200	-	-	-	-	-	-	-	-	-	-	-	-
10) LT325 - Propulsion Shafting																				
10.1) Propulsion Shafting	A		-	-	-	-	-	-	-	-	-	-	2.500	-	-	-	-	-	-	-
Subtotal: 10) LT325 - Propulsion Shafting			-	-	0.000	-	-	-	-	-	-	-	2.500	-	-	-	-	-	-	-
11) LT326 - Training Test Equipment⁽³⁾																				
11.1) Training Test Equipment	A		-	-	-	-	-	-	-	-	-	-	3.800	-	-	-	-	-	-	-
Subtotal: 11) LT326 - Training Test Equipment			-	-	0.000	-	-	-	-	-	-	-	3.800	-	-	-	-	-	-	-
12) LT328 - Mobile Cleaning Recovery and Recycle System (MCRRS)																				
12.1) MCRRS Production ^(†)	A		-	-	-	750,000.00	1	0.750	-	-	-	-	-	-	-	-	-	-	-	-
12.2) MCRRS Upgrades ^(†)	A		-	-	-	615,000.00	2	1.230	-	-	-	-	-	-	-	-	-	-	-	-
12.3) MCRRS Engineering Support	A		-	-	-	-	-	1.560	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 12) LT328 - Mobile Cleaning Recovery and Recycle System (MCRRS)			-	-	0.000	-	-	3.540	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	127.730	-	-	17.759	-	-	14.415	-	-	16.465	-	-	-	-	-	16.465

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) LT110 Item 3, Procurement cost for FY17 cost elements 3.1-3.3 reflect vendor cost increases based on prior year procurements.
- (2) LT110 CE 3.1, DDG 51 Blade Set STBD/PORT pricing for FY17 is per Rolls-Royce Marine North America Inc. (RRMNA) Rough Order of Magnitude (ROM), dated 23 Jan 2015
- (3)

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Aggregated Items: Items Less than \$5M Programs
---	--	---

Item Number / Title [DODIC]	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) LT110 - Propellers and Shafts												
3.1) Blade Set Port/STBD, DDG 51 CL ⁽²⁾		2016	Rolls Royce / MS	C / FP	NAVSUP	Oct 2015	Jan 2018	1	630,000.00	Y		
3.1) Blade Set Port/STBD, DDG 51 CL ⁽²⁾		2017	Rolls Royce / MS	C / FP	NAVSUP	Apr 2017	Jul 2019	2	930,500.00	Y		
3.2) Hub Port DDG51 CL		2015	Rolls Royce / MS	C / FP	NAVICP	May 2015	May 2017	1	1,011K	Y		
3.2) Hub Port DDG51 CL		2016	Rolls Royce / MS	C / FP	NAVSUP	Apr 2016	Apr 2018	1	875,000.00	Y		
3.2) Hub Port DDG51 CL		2017	Rolls Royce / MS	C / FP	NAVSUP	Apr 2017	Apr 2019	1	1,016K	Y		
3.3) Hub STBD DDG51 CL		2016	Rolls Royce / MS	C / FP	NAVICP	Apr 2016	Apr 2018	1	875,000.00	Y		
3.3) Hub STBD DDG51 CL		2017	Rolls Royce / MS	C / FP	NAVSUP	Apr 2017	Apr 2019	1	1,016K	Y		
3.4) Prop Shaft DDG51 CL		2011	Erie Forge / PA	C / FP	NAVICP	Aug 2012	Aug 2016	1	1,427K	Y		
3.4) Prop Shaft DDG51 CL		2012	Erie Forge / PA	C / FP	NAVICP	Sep 2012	Sep 2016	1	1,436K	Y		
3.4) Prop Shaft DDG51 CL		2014	Erie Forge / PA	C / FP	NAVICP	Jul 2014	Jul 2018	1	1,358K	Y		
3.4) Prop Shaft DDG51 CL		2016	Erie Forge / PA	C / FP	NAVICP	Apr 2016	Apr 2020	1	1,437K	Y		
3.5) Stern Tube DDG51 CL		2011	Erie Forge / PA	C / FP	NAVICP	Aug 2012	Aug 2016	2	1,100K	Y		
3.5) Stern Tube DDG51 CL		2012	Erie Forge / PA	C / FP	NAVICP	Sep 2012	Sep 2016	1	1,116K	Y		
3.5) Stern Tube DDG51 CL		2013	Erie Forge / PA	C / FP	NAVICP	Jul 2013	Jul 2017	1	1,152K	Y		
3.5) Stern Tube DDG51 CL		2015	Erie Forge / PA	C / FP	NAVICP	Jul 2015	Jul 2019	2	1,193K	Y		
3.5) Stern Tube DDG51 CL		2016	Erie Forge / PA	C / FP	NAVICP	Apr 2016	Apr 2020	1	1,181K	Y		
8) Moonpool Launch and Recovery Sys (MLARS)												
8.1) Moonpool Launch & Recovery Sys		2015 ⁽⁴⁾	HALTER MARINE / Gulfport, MS	SS / FFP	NAVSEA	Aug 2015	Aug 2015	1	4,200K	Y		
12) LT328 - Mobile Cleaning Recovery and Recycle System (MCRRS)												
12.1) MCRRS Production		2015	Triverus, LLC / Palmer, AK	C / CPFF	NSWC Carderock	Sep 2015	Feb 2016	1	750,000.00	Y		
12.2) MCRRS Upgrades		2015	Triverus, LLC / Palmer, AK	C / CPFF	NSWC Carderock	Sep 2015	Feb 2016	2	615,000.00	Y		

Footnotes:

⁽⁴⁾ NAVSEA's Regional Contracting Office completed a Justification & Approval J&A on 30 June which determined Halter Marine to be the Sole Source for the MLARS procurement.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 1 / LT160 - Machinery Plant Upgrades
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	162.485	19.484	10.305	23.743	-	23.743	20.896	16.793	20.282	30.425	-	304.413
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	162.485	19.484	10.305	23.743	-	23.743	20.896	16.793	20.282	30.425	-	304.413
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	162.485	19.484	10.305	23.743	-	23.743	20.896	16.793	20.282	30.425	-	304.413
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

ICAN provides core infrastructure (node rooms, air blown fiber optic cable plant, network services) for integrating voice, video and data systems. This capability is easily upgradable for rapid and cost effective expansion to support new technologies, such as IT-21, and is compatible with the Navy integrated Information Networks MOA.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0981 / Items less than \$5 Million **Modification Number / Title:** 1 / LT160 - Machinery Plant Upgrades

Models of Systems Affected: Machinery Plant Upgrades **Modification Type:** TBD **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> LT160 - Machinery Plant Upgrades												
B Kits												
Recurring												
1.1.1) Machinery Plant Upgrades - NonOrganic ⁽⁵⁾	25 / 61.772	2 / 6.614	2 / 6.000	4 / 5.765	- / -	4 / 5.765	3 / 5.845	3 / 6.825	4 / 7.711	4 / 10.575	- / -	47 / 111.107
<i>Subtotal: Recurring</i>	- / 61.772	- / 6.614	- / 6.000	- / 5.765	- / -	- / 5.765	- / 5.845	- / 6.825	- / 7.711	- / 10.575	- / -	- / 111.107
<i>Subtotal: LT160 - Machinery Plant Upgrades</i>	25 / 61.772	2 / 6.614	2 / 6.000	4 / 5.765	- / -	4 / 5.765	3 / 5.845	3 / 6.825	4 / 7.711	4 / 10.575	- / -	47 / 111.107
<i>Subtotal: Procurement, All Modification Items</i>	- / 61.772	- / 6.614	- / 6.000	- / 5.765	- / -	- / 5.765	- / 5.845	- / 6.825	- / 7.711	- / 10.575	- / -	- / 111.107
Installation												
<i>Modification Item 1 of 1:</i> LT160 - Machinery Plant Upgrades	- / 100.713	- / 12.870	- / 4.305	- / 17.978	- / -	- / 17.978	- / 15.051	- / 9.968	- / 12.571	- / 19.850	- / -	- / 193.306
<i>Subtotal: Installation</i>	- / 100.713	- / 12.870	- / 4.305	- / 17.978	- / -	- / 17.978	- / 15.051	- / 9.968	- / 12.571	- / 19.850	- / -	- / 193.306
Total												
Total Cost (Procurement + Support + Installation)	162.485	19.484	10.305	23.743	-	23.743	20.896	16.793	20.282	30.425	-	304.413

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 1 / LT160 - Machinery Plant Upgrades

Modification Item 1 of 1: LT160 - Machinery Plant Upgrades

Manufacturer Information

Manufacturer Name: various	Manufacturer Location: various
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 5

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Nov 2014	Nov 2015	Nov 2016				
Delivery Dates	Apr 2015	Apr 2016	Apr 2017				

Installation Information

Method of Implementation: AIT:: Installation Name: Machinery Plant Upgrades

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	24 / 98.563	1 / 12.020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	25 / 110.583
FY 2015	0 / 2.150	- / -	2 / 2.454	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.604
FY 2016	- / -	- / 0.850	1 / 1.346	1 / 5.590	- / -	1 / 5.590	- / -	- / -	- / -	- / -	- / -	2 / 7.786
FY 2017	- / -	- / -	- / 0.505	1 / 6.135	- / -	1 / 6.135	3 / 9.643	- / -	- / -	- / -	- / -	4 / 16.283
FY 2018	- / -	- / -	- / -	- / 6.253	- / -	- / 6.253	1 / 3.450	2 / 5.200	- / -	- / -	- / -	3 / 14.903
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.958	1 / 2.471	2 / 4.723	- / -	- / -	3 / 9.152
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.297	2 / 4.848	2 / 9.910	- / -	4 / 17.055
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.000	2 / 9.940	2 / -	4 / 12.940
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	24 / 100.713	1 / 12.870	3 / 4.305	2 / 17.978	- / -	2 / 17.978	4 / 15.051	3 / 9.968	4 / 12.571	4 / 19.850	2 / -	47 / 193.306

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	24	-	-	1	-	-	2	-	1	-	1	-	1	-	3	-	1	1	1	-	1	1	1	1	2	-	-	1	3	-	2	47
Out	19	-	2	2	1	-	1	-	-	3	-	1	-	-	1	1	-	-	-	3	1	1	1	1	2	-	2	-	1	1	4	47

Footnotes:

⁽⁵⁾ Increase in installation costs from FY16 to FY17 is due to the mix of the Ship Change Documents (SCDs) being executed in FY17. Average cost of the FY17 SCDs is significantly larger than FY16 due to Navigation Critical Distribution SCDs (installs costs of ~\$5M) on CVN69 and 76 as well as the high DSA cost associated with some FY18 Voice System SCDs (specifically Shipboard wireless voice systems). The Machinery Plant Upgrade project within the CVN Fleet Modernization Program (FMP) encompasses CVN Machinery Control Systems, Ship Control (Navigation/Steering), Integrated Voice Control Networks, Announcing Systems and Shipboard Air Traffic Control Communication Systems. The machinery plant upgrade currently consists of 33 different modernization alterations with a current value of approximately \$42M for all the alterations. During each CNO availability, we schedule and complete a subset of these 33 alterations. Every hull may not get all 33 of the Machinery Plant Upgrade. It depends on ship configuration. These alts are scheduled for installation over 3-4 availabilities (which may be 9-12 years) with many installations occurring in later years of the FYDP. Additionally, the machinery plant upgrade

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 1 / LT160 - Machinery Plant Upgrades
<p>program is technology driven and many alterations are still being finalized in the Navy modernization Program (i.e. Ship Change Document (SCD) development) process for installation in later years. New SCDs continue to be developed to proactively address obsolescence issues associated with ever changing technology. The current budget for the out years is based on initial SCD development estimates. Individual SCDs can range in cost from \$5K (for software only changes) to ~ \$14M for major system upgrades. Changes from PB16 for FY15-FY16: FY15 MPU (LT 160) added \$1.9M to installation line - funding realigned from LT306 (AVR) install line. FY16 MPU (LT 160) added \$2.9M to procurement efforts- funding realigned from LT319 (JSF Support heavy unrep) and LT307 (Carrier Canned Lube oil pump).</p>		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0981 / Items less than \$5 Million				Modification Number / Title: 2 / LT306 - Automated Voltage Regulator (AVR)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	45.884	5.130	-	2.600	-	2.600	0.300	1.855	-	-	8.100	63.869
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	45.884	5.130	-	2.600	-	2.600	0.300	1.855	-	-	8.100	63.869
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	45.884	5.130	-	2.600	-	2.600	0.300	1.855	-	-	8.100	63.869
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The CVN Automatic Voltage Regulator (AVR) is a microprocessor based voltage regulator system for the NIMITZ Class, programmed to replace the legacy analog voltage regulator, which, although operational, lacks the improved reliability and lower maintenance costs of the AVR. It controls the output voltage of a turbine generator (TG), which converts steam into the electricity used for aircraft and combat operations, and reactor cooling.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 2 / LT306 - Automated Voltage Regulator (AVR)

Models of Systems Affected: Auto Voltage Regulator	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: LT306 - Automated Voltage Regulator (AVR)												
B Kits												
Recurring												
1.1.1) AVR - NonOrganic	49 / 22.060	5 / 2.875	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 4.700	62 / 29.635
1.1.2) Field Engineering Services - NonOrganic	- / 1.247	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.547
Subtotal: Recurring	- / 23.307	- / 3.175	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.700	- / 31.182
Subtotal: LT306 - Automated Voltage Regulator (AVR)	49 / 23.307	5 / 3.175	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 4.700	62 / 31.182
Subtotal: Procurement, All Modification Items	- / 23.307	- / 3.175	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.700	- / 31.182

Installation

Modification Item 1 of 1: LT306 - Automated Voltage Regulator (AVR)	- / 22.577	- / 1.955	- / -	- / 2.600	- / -	- / 2.600	- / 0.300	- / 1.855	- / -	- / -	- / 3.400	- / 32.687
Subtotal: Installation	- / 22.577	- / 1.955	- / -	- / 2.600	- / -	- / 2.600	- / 0.300	- / 1.855	- / -	- / -	- / 3.400	- / 32.687

Total

Total Cost (Procurement + Support + Installation)	45.884	5.130	-	2.600	-	2.600	0.300	1.855	-	-	8.100	63.869
--	---------------	--------------	----------	--------------	----------	--------------	--------------	--------------	----------	----------	--------------	---------------

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 2 / LT306 - Automated Voltage Regulator (AVR)

Modification Item 1 of 1: LT306 - Automated Voltage Regulator (AVR)

Manufacturer Information

Manufacturer Name: NG P/CS				Manufacturer Location: MD			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 18			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Apr 2015						
Delivery Dates	Oct 2016						

Installation Information

Method of Implementation: SHIPYARD:: Installation Name: AVR

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	37 / 22.577	4 / 1.955	- / -	4 / 1.300	- / 0.000	4 / 1.300	- / 0.300	4 / 1.855	- / -	- / -	- / 0.000	49 / 27.987
FY 2015	- / -	- / -	- / -	4 / 1.300	- / -	4 / 1.300	- / -	- / -	- / -	- / -	- / -	4 / 1.300
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 3.400	8 / 3.400
Total	37 / 22.577	4 / 1.955	- / -	8 / 2.600	- / -	8 / 2.600	- / 0.300	4 / 1.855	- / -	- / -	8 / 3.400	61 / 32.687

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	37	-	4	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	8	61
Out	37	-	-	-	-	-	4	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	8	61

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0981 / Items less than \$5 Million				Modification Number / Title: 3 / LT307 - Carrier Canned Lube Oil Pump				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	18.128	6.017	-	-	-	-	2.950	6.750	-	-	-	33.845
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	18.128	6.017	-	-	-	-	2.950	6.750	-	-	-	33.845
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	18.128	6.017	-	-	-	-	2.950	6.750	-	-	-	33.845
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Canned Lube Oil Pump (CLOP) with a two-speed motor will replace both the Standby Lube Oil Pump (SLOP) and Emergency Lube Oil Pump (ELOP) on all CVN-68 Class ships. The ships have repeatedly overhauled SLOPs to replace turbine and reduction gear parts as well as replacing leaking mechanical seals at excessive costs. The ELOPs are also regularly overhauled to replace leaking mechanical seals. In addition, the installed ELOP does not meet all operational requirements for Lube Oil System. The motor and pump are an integral piece on the CLOP which alleviates any alignment issues and a mechanical seal is no longer required.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 3 / LT307 - Carrier Canned Lube Oil Pump

Models of Systems Affected: Carrier Canned Lube Oil Pump	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> LT307 - Carrier Canned Lube Oil Pump												
B Kits												
Recurring												
1.1.1) Canned Lube Oil Pump - NonOrganic ⁽⁶⁾	16 / 5.000	- / -	- / -	- / -	- / -	- / -	8 / 2.200	- / -	- / -	- / -	- / -	24 / 7.200
<i>Subtotal: Recurring</i>	- / 5.000	- / -	- / -	- / -	- / -	- / -	- / 2.200	- / -	- / -	- / -	- / -	- / 7.200
<i>Subtotal: LT307 - Carrier Canned Lube Oil Pump</i>	16 / 5.000	- / -	- / -	- / -	- / -	- / -	8 / 2.200	- / -	- / -	- / -	- / -	24 / 7.200
<i>Subtotal: Procurement, All Modification Items</i>	- / 5.000	- / -	- / -	- / -	- / -	- / -	- / 2.200	- / -	- / -	- / -	- / -	- / 7.200
Installation												
<i>Modification Item 1 of 1:</i> LT307 - Carrier Canned Lube Oil Pump	- / 13.128	- / 6.017	- / -	- / -	- / -	- / -	- / 0.750	- / 6.750	- / -	- / -	- / -	- / 26.645
<i>Subtotal: Installation</i>	- / 13.128	- / 6.017	- / -	- / -	- / -	- / -	- / 0.750	- / 6.750	- / -	- / -	- / -	- / 26.645
Total												
Total Cost (Procurement + Support + Installation)	18.128	6.017	-	-	-	-	2.950	6.750	-	-	-	33.845

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 3 / LT307 - Carrier Canned Lube Oil Pump

Modification Item 1 of 1: LT307 - Carrier Canned Lube Oil Pump

Manufacturer Information

Manufacturer Name: IMO Pumps	Manufacturer Location: Monroe, NC
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates				Apr 2018			
Delivery Dates				Apr 2019			

Installation Information

Method of Implementation: Shipyard:: Installation Name: Canned Lube Oil Pump

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	11 / 13.128	5 / 6.017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	16 / 19.145
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.750	8 / 6.750	- / -	- / -	- / -	8 / 7.500
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 13.128	5 / 6.017	- / -	- / -	- / -	- / -	- / 0.750	8 / 6.750	- / -	- / -	- / -	24 / 26.645

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	11	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	24
Out	-	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	24	

Footnotes:

(6) Changes from PB 16: The last shipset of material (pumps/controllers) was scheduled to be procured in FY16. The Department will no longer procure these pumps in FY 16 due to uncertainty of next scheduled avail date on CVN 75. The next CVN 75 availability is in late FY19 (material will be procured in FY18 to support. Production lead time is ~12 months. CVN75 is the only remaining ship receiving this upgrade. Note: Installation costs for Lube Oil Service Pump effort has been updated to reflect actual costs from the performing activity (Puget Sound Naval Shipyard).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 4 / LT308 - LHD/LHA Davits
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	15.425	1.332	2.615	3.455	-	3.455	6.286	0.395	3.319	-	-	32.827
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	15.425	1.332	2.615	3.455	-	3.455	6.286	0.395	3.319	-	-	32.827
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	15.425	1.332	2.615	3.455	-	3.455	6.286	0.395	3.319	-	-	32.827
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This shipalt installs Boat (RIB) Davits replacing Land Craft Personnel (LCPL) Davits on the LHA/LHD Class Ships.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0981 / Items less than \$5 Million					Modification Number / Title: 4 / LT308 - LHD/LHA Davits			
Models of Systems Affected: Boat (RIB) Davits				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> LT308 - LHD/LHA Davits													
B Kits													
Recurring													
1.1.1) Boat (RIB) Davits - NonOrganic ⁽⁷⁾	9 / 7.725	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 7.725	
<i>Subtotal: Recurring</i>	- / 7.725	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.725	
<i>Subtotal: LT308 - LHD/LHA Davits</i>	9 / 7.725	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 7.725	
<i>Subtotal: Procurement, All Modification Items</i>	- / 7.725	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.725	
Installation													
<i>Modification Item 1 of 1:</i> LT308 - LHD/LHA Davits	- / 7.700	- / 1.332	- / 2.615	- / 3.455	- / -	- / 3.455	- / 6.286	- / 0.395	- / 3.319	- / -	- / -	- / 25.102	
<i>Subtotal: Installation</i>	- / 7.700	- / 1.332	- / 2.615	- / 3.455	- / -	- / 3.455	- / 6.286	- / 0.395	- / 3.319	- / -	- / -	- / 25.102	
Total													
Total Cost (Procurement + Support + Installation)	15.425	1.332	2.615	3.455	-	3.455	6.286	0.395	3.319	-	-	32.827	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 4 / LT308 - LHD/LHA Davits

Modification Item 1 of 1: LT308 - LHD/LHA Davits

Manufacturer Information

Manufacturer Name: Not Specified.	Manufacturer Location: Not Specified..
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 0

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: Boat (RIB) Davits

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	4 / 7.700	- / 1.332	1 / 2.615	1 / 3.455	- / 0.000	1 / 3.455	2 / 6.286	- / 0.395	1 / 3.319	- / -	- / 0.000	9 / 25.102
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 7.700	- / 1.332	1 / 2.615	1 / 3.455	- / -	1 / 3.455	2 / 6.286	- / 0.395	1 / 3.319	- / -	- / -	9 / 25.102

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	4	-	-	-	-	-	1	-	-	-	-	-	1	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	9
Out	4	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	9

Footnotes:

(7) FY17 funds are required for one installation, and DSA for an FY18 installation.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 5 / LT309 - Solid-State Lighting (SSL)
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	15.742	3.401	2.888	1.912	-	1.912	1.990	6.973	4.099	6.180	-	43.185
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	15.742	3.401	2.888	1.912	-	1.912	1.990	6.973	4.099	6.180	-	43.185
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	15.742	3.401	2.888	1.912	-	1.912	1.990	6.973	4.099	6.180	-	43.185

(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:

Procure/Install solid state lighting fixtures to replace fluorescent and incandescent lighting fixtures installed on Amphibious Class ships.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0981 / Items less than \$5 Million					Modification Number / Title: 5 / LT309 - Solid-State Lighting (SSL)			
Models of Systems Affected: Solid State Lighting				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: LT309 - Solid-State Lighting (SSL)</i>													
B Kits													
Recurring													
1.1.1) Solid State Lighting - NonOrganic ⁽⁶⁾	19 / 8.187	4 / 1.675	4 / 1.419	2 / 1.060	- / -	2 / 1.060	1 / 0.550	12 / 4.309	3 / 0.930	11 / 4.113	- / -	56 / 22.243	
<i>Subtotal: Recurring</i>	- / 8.187	- / 1.675	- / 1.419	- / 1.060	- / -	- / 1.060	- / 0.550	- / 4.309	- / 0.930	- / 4.113	- / -	- / 22.243	
<i>Subtotal: LT309 - Solid-State Lighting (SSL)</i>	19 / 8.187	4 / 1.675	4 / 1.419	2 / 1.060	- / -	2 / 1.060	1 / 0.550	12 / 4.309	3 / 0.930	11 / 4.113	- / -	56 / 22.243	
<i>Subtotal: Procurement, All Modification Items</i>	- / 8.187	- / 1.675	- / 1.419	- / 1.060	- / -	- / 1.060	- / 0.550	- / 4.309	- / 0.930	- / 4.113	- / -	- / 22.243	
Support (All Modification Items)													
2.1) Engineering Services	- / -	- / -	- / -	- / 0.750	- / -	- / 0.750	- / 0.528	- / -	- / -	- / -	- / -	- / 1.278	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / 0.750	- / -	- / 0.750	- / 0.528	- / -	- / -	- / -	- / -	- / 1.278	
Installation													
<i>Modification Item 1 of 1: LT309 - Solid-State Lighting (SSL)</i>	- / 7.555	- / 1.726	- / 1.469	- / 0.102	- / -	- / 0.102	- / 0.912	- / 2.664	- / 3.169	- / 2.067	- / -	- / 19.664	
<i>Subtotal: Installation</i>	- / 7.555	- / 1.726	- / 1.469	- / 0.102	- / -	- / 0.102	- / 0.912	- / 2.664	- / 3.169	- / 2.067	- / -	- / 19.664	
Total													
Total Cost (Procurement + Support + Installation)	15.742	3.401	2.888	1.912	-	1.912	1.990	6.973	4.099	6.180	-	43.185	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 5 / LT309 - Solid-State Lighting (SSL)

Modification Item 1 of 1: LT309 - Solid-State Lighting (SSL)

Manufacturer Information

Manufacturer Name: Energy Focus Inc	Manufacturer Location: Solon, OH
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 6

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Dec 2014	Dec 2015	Dec 2016				
Delivery Dates	Jun 2015	Jun 2016	Jun 2017				

Installation Information

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

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	19 / 7.555	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	19 / 7.555
FY 2015	- / -	4 / 1.726	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.726
FY 2016	- / -	- / -	4 / 1.469	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.469
FY 2017	- / -	- / -	- / -	- / 0.102	- / -	- / 0.102	2 / 0.860	- / -	- / -	- / -	- / -	2 / 0.962
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.052	1 / 0.438	- / -	- / -	- / -	1 / 0.490
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.226	6 / 2.674	- / -	- / -	12 / 4.900
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.495	1 / 0.460	- / -	3 / 0.955
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.607	5 / -	11 / 1.607
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	19 / 7.555	4 / 1.726	4 / 1.469	- / 0.102	- / -	- / 0.102	2 / 0.912	7 / 2.664	8 / 3.169	7 / 2.067	5 / -	56 / 19.664

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	19	-	-	4	-	-	-	-	4	-	-	-	-	-	2	-	-	-	1	-	3	3	3	3	1	1	-	1	3	3	5	56
Out	19	-	-	-	4	-	-	-	4	-	-	-	-	-	-	2	-	-	-	1	-	3	3	3	3	1	1	-	1	-	11	56

Footnotes:

(8) Increase in FY 17 unit cost is due to multiple SSL Ship Change Documents to cover various fixtures and lamp/bulb replacements. Also includes additional effort to convert LSD Vehicle Storage Areas (VSAs) to LEDs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 6 / LT314 - Carrier Oil Water Separator
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	1.749	6.223	1.600	-	1.600	5.000	6.200	6.800	1.600	3.200	32.372
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	1.749	6.223	1.600	-	1.600	5.000	6.200	6.800	1.600	3.200	32.372
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	1.749	6.223	1.600	-	1.600	5.000	6.200	6.800	1.600	3.200	32.372

(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 Oil Water Separator (OWS) will be installed on the CVN 68 Class to meet the new environmental discharge law of 15 parts per million (ppm) worldwide. The current OWSs installed on CVN 68 Class experience a high degree of costly maintenance and reliability issues and they do not meet the 15 ppm requirement.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0981 / Items less than \$5 Million **Modification Number / Title:** 6 / LT314 - Carrier Oil Water Separator

Models of Systems Affected: Carrier Oil Water Separator **Modification Type:** TBD **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> LT314 - Carrier Oil Water Separator												
B Kits												
Recurring												
1.1.1) Oil Water Separator - NonOrganic ⁽⁹⁾	- / -	2 / 1.160	- / -	2 / 1.200	- / -	2 / 1.200	2 / 1.200	4 / 2.400	- / -	2 / 1.200	- / -	12 / 7.160
<i>Subtotal: Recurring</i>	- / 0.000	- / 1.160	- / -	- / 1.200	- / -	- / 1.200	- / 1.200	- / 2.400	- / -	- / 1.200	- / -	- / 7.160
<i>Subtotal: LT314 - Carrier Oil Water Separator</i>	- / -	2 / 1.160	- / -	2 / 1.200	- / -	2 / 1.200	2 / 1.200	4 / 2.400	- / -	2 / 1.200	- / -	12 / 7.160
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 1.160	- / -	- / 1.200	- / -	- / 1.200	- / 1.200	- / 2.400	- / -	- / 1.200	- / -	- / 7.160
Installation												
<i>Modification Item 1 of 1:</i> LT314 - Carrier Oil Water Separator	- / 0.000	- / 0.589	- / 6.223	- / 0.400	- / -	- / 0.400	- / 3.800	- / 3.800	- / 6.800	- / 0.400	- / 3.200	- / 25.212
<i>Subtotal: Installation</i>	- / 0.000	- / 0.589	- / 6.223	- / 0.400	- / -	- / 0.400	- / 3.800	- / 3.800	- / 6.800	- / 0.400	- / 3.200	- / 25.212
Total												
Total Cost (Procurement + Support + Installation)	0.000	1.749	6.223	1.600	-	1.600	5.000	6.200	6.800	1.600	3.200	32.372

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 6 / LT314 - Carrier Oil Water Separator

Modification Item 1 of 1: LT314 - Carrier Oil Water Separator

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Nov 2014		Nov 2016	Nov 2017	Nov 2018		Nov 2020
Delivery Dates	Nov 2015		Nov 2017	Nov 2018	Nov 2019		Nov 2021

Installation Information

Method of Implementation: AIT:: Installation Name: Oil Water Separator

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / 0.589	2 / 6.223	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.812
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / 0.400	- / -	- / 0.400	2 / 3.400	- / -	- / -	- / -	- / -	2 / 3.800
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.400	2 / 3.300	- / -	- / -	- / -	2 / 3.700
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500	4 / 6.800	- / -	- / -	4 / 7.300
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.400	2 / 3.200	2 / 3.600
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / 0.589	2 / 6.223	- / 0.400	- / -	- / 0.400	2 / 3.800	2 / 3.800	4 / 6.800	- / 0.400	2 / 3.200	12 / 25.212

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2	-	-	-	-	-	2	-	2	2	-	-	-	-	2	12
Out	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2	-	2	2	-	2	-	-	2	12

Footnotes:

⁽⁹⁾ Changes from PB 16: Fielding plan revised to account for avail schedule changes and system design maturity. Units originally planned for procurement in FY16 for CVN 69 and CVN 76 (for installation in FY17) were moved to planned procurement in FY 19 and installation in FY 20. CVN 69 has a unique design which is still in progress and will not be finalized in time for proper planning and install. Installation on CVN 76 has been put on hold pending determination of whether an install can be completed on the Forward Deployed Naval Force (FDFN) carrier. Partial Install or incremental install is being investigated. Alternative is to wait until ship returns to CONUS. Remaining procurements/installs planned to level load the AIT based on latest Carrier Availability schedule. Changes from PB16 to PB17 for FY16 are due to the first time installation proposal estimate from the AIT contractor being significantly higher than government estimate. The program realigned funds to installation to cover the installation cost increase.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 7 / LT316 - Patrol Coastal ECDIS
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	4.783	1.574	3.831	0.395	-	0.395	-	-	-	-	-	10.583
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	4.783	1.574	3.831	0.395	-	0.395	-	-	-	-	-	10.583
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	4.783	1.574	3.831	0.395	-	0.395	-	-	-	-	-	10.583
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funding provided for Electronic Chart Display Information System-Navy (ECDIS-N) for the Patrol Coastal Ships. This modification installs hardware and software for an approved ECDIS-N for digital nautical charts aboard the PC-1 Class ships per CNO direction to transition from paper to electronic charts by the end of FY16.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0981 / Items less than \$5 Million					Modification Number / Title: 7 / LT316 - Patrol Coastal ECDIS			
Models of Systems Affected: PC ECDIS				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> LT316 - Patrol Coastal ECDIS													
B Kits													
Recurring													
1.1.1) ECDIS-N - NonOrganic ⁽¹⁰⁾	6 / 2.611	5 / 1.500	2 / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 4.711	
<i>Subtotal: Recurring</i>	- / 2.611	- / 1.500	- / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.711	
<i>Subtotal: LT316 - Patrol Coastal ECDIS</i>	6 / 2.611	5 / 1.500	2 / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 4.711	
<i>Subtotal: Procurement, All Modification Items</i>	- / 2.611	- / 1.500	- / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.711	
Installation													
<i>Modification Item 1 of 1:</i> LT316 - Patrol Coastal ECDIS	- / 2.172	- / 0.074	- / 3.231	- / 0.395	- / -	- / 0.395	- / -	- / -	- / -	- / -	- / -	- / 5.872	
<i>Subtotal: Installation</i>	- / 2.172	- / 0.074	- / 3.231	- / 0.395	- / -	- / 0.395	- / -	- / -	- / -	- / -	- / -	- / 5.872	
Total													
Total Cost (Procurement + Support + Installation)	4.783	1.574	3.831	0.395	-	0.395	-	-	-	-	-	10.583	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 7 / LT316 - Patrol Coastal ECDIS

Modification Item 1 of 1: LT316 - Patrol Coastal ECDIS

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN SYSTEEMS CORP. ⁽¹¹⁾				Manufacturer Location: CHARLOTTESVILLE, VA			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 6			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Jul 2015	Nov 2015					
Delivery Dates	Aug 2015	May 2016					

Installation Information

Method of Implementation: AIT:: Installation Name: ECDIS-N

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	4 / 2.172	- / -	2 / 0.790	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 2.962
FY 2015	- / -	- / 0.037	5 / 2.012	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.049
FY 2016	- / -	- / 0.037	1 / 0.429	1 / 0.395	- / -	1 / 0.395	- / -	- / -	- / -	- / -	- / -	2 / 0.861
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 2.172	- / 0.074	8 / 3.231	1 / 0.395	- / -	1 / 0.395	- / -	- / -	- / -	- / -	- / -	13 / 5.872

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	3	1	-	-	-	-	1	5	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	2	1	1	-	-	-	-	5	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

⁽¹⁰⁾ The Navigator of the Navy directed all ships to be paperless by the end of FY16. To comply, PCs must receive the navigation and ECDIS-N installations.

⁽¹¹⁾ Installing 8 units in FY16 to meet the Navigator of the Navy requirement by end of FY16 per COMPACFLT/COMUSFLTFORCOM INSTRUCTION 3530.1A.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0981 / Items less than \$5 Million				Modification Number / Title: 8 / LT316 - Patrol Coastal Navigation Upgrade				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	6.132	0.422	5.586	0.640	-	0.640	-	-	-	-	-	12.780
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	6.132	0.422	5.586	0.640	-	0.640	-	-	-	-	-	12.780
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	6.132	0.422	5.586	0.640	-	0.640	-	-	-	-	-	12.780
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funding provided for Navigation Upgrades for the Patrol Coastal Ships. The navigation sensor suite modernization provides essential technology improvements using the mobility mission support equipment, satellite-based position keeping, electronic heading, and automatic helm control.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 8 / LT316 - Patrol Coastal Navigation Upgrade

Models of Systems Affected: PC Navigation Upgrade	Modification Type: TBD	Related RDT&E PEs:
--	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> LT316 - Patrol Coastal Navigation Upgrade												
B Kits												
Recurring												
1.1.1) Navigation Upgrade - NonOrganic ⁽¹²⁾	11 / 3.527	1 / 0.400	1 / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 4.327
<i>Subtotal: Recurring</i>	- / 3.527	- / 0.400	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.327
<i>Subtotal: LT316 - Patrol Coastal Navigation Upgrade</i>	11 / 3.527	1 / 0.400	1 / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 4.327
<i>Subtotal: Procurement, All Modification Items</i>	- / 3.527	- / 0.400	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.327
Installation												
<i>Modification Item 1 of 1:</i> LT316 - Patrol Coastal Navigation Upgrade	- / 2.605	- / 0.022	- / 5.186	- / 0.640	- / -	- / 0.640	- / -	- / -	- / -	- / -	- / -	- / 8.453
<i>Subtotal: Installation</i>	- / 2.605	- / 0.022	- / 5.186	- / 0.640	- / -	- / 0.640	- / -	- / -	- / -	- / -	- / -	- / 8.453
Total												
Total Cost (Procurement + Support + Installation)	6.132	0.422	5.586	0.640	-	0.640	-	-	-	-	-	12.780

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 8 / LT316 - Patrol Coastal Navigation Upgrade

Modification Item 1 of 1: LT316 - Patrol Coastal Navigation Upgrade

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 15

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Mar 2015	Nov 2015					
Delivery Dates	Jun 2016	Feb 2017					

Installation Information

Method of Implementation: AIT:: Installation Name: Navigation Upgrade

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	4 / 2.605	- / -	7 / 4.524	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	11 / 7.129
FY 2015	- / -	- / 0.022	1 / 0.640	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.662
FY 2016	- / -	- / -	- / 0.022	1 / 0.640	- / -	1 / 0.640	- / -	- / -	- / -	- / -	- / -	1 / 0.662
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 2.605	- / 0.022	8 / 5.186	1 / 0.640	- / -	1 / 0.640	- / -	- / -	- / -	- / -	- / -	13 / 8.453

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	4	-	-	-	-	-	1	5	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Out	4	-	-	-	-	-	-	5	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13

Footnotes:
⁽¹²⁾ The Navigator of the Navy directed all ships to be paperless by the end of FY16. To comply, PCs must receive the navigation and ECDIS-N installations.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 9 / LT316 - Patrol Coastal FLIR
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	2.330	-	1.770	2.528	-	2.528	-	-	-	-	1.680	8.308
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	2.330	-	1.770	2.528	-	2.528	-	-	-	-	1.680	8.308
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	2.330	-	1.770	2.528	-	2.528	-	-	-	-	1.680	8.308

(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:

Funding provided for the Forward Looking Infrared (FLIR) mod on Patrol Coastal Ship. FLIR Mod replaces an obsolete system and installs an Electro-Optic system that provides situational awareness with visual imagery along with detailed ship system and target information.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0981 / Items less than \$5 Million					Modification Number / Title: 9 / LT316 - Patrol Coastal FLIR			
Models of Systems Affected: PC FLIR				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: LT316 - Patrol Coastal FLIR</i>													
B Kits													
Recurring													
1.1.1) FLIR - NonOrganic ⁽¹³⁾	4 / 1.779	- / -	5 / 1.770	3 / 1.059	- / -	3 / 1.059	- / -	- / -	- / -	- / -	3 / 1.050	15 / 5.658	
<i>Subtotal: Recurring</i>	- / 1.779	- / -	- / 1.770	- / 1.059	- / -	- / 1.059	- / -	- / -	- / -	- / -	- / 1.050	- / 5.658	
<i>Subtotal: LT316 - Patrol Coastal FLIR</i>	4 / 1.779	- / -	5 / 1.770	3 / 1.059	- / -	3 / 1.059	- / -	- / -	- / -	- / -	3 / 1.050	15 / 5.658	
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.779	- / -	- / 1.770	- / 1.059	- / -	- / 1.059	- / -	- / -	- / -	- / -	- / 1.050	- / 5.658	
Installation													
<i>Modification Item 1 of 1: LT316 - Patrol Coastal FLIR</i>													
<i>Subtotal: Installation</i>	- / 0.551	- / -	- / -	- / 1.469	- / -	- / 1.469	- / -	- / -	- / -	- / -	- / 0.630	- / 2.650	
Total													
Total Cost (Procurement + Support + Installation)	2.330	-	1.770	2.528	-	2.528	-	-	-	-	1.680	8.308	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 9 / LT316 - Patrol Coastal FLIR

Modification Item 1 of 1: LT316 - Patrol Coastal FLIR

Manufacturer Information

Manufacturer Name: FLIR Systems	Manufacturer Location: Portland, Oregon
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 3

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Jan 2016	Jan 2017				
Delivery Dates		Apr 2016	Apr 2017				

Installation Information

Method of Implementation: AIT:: Installation Name: FLIR

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	4 / 0.551	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	4 / 0.551
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	5 / 0.955	- / -	5 / 0.955	- / -	- / -	- / -	- / -	- / -	5 / 0.955
FY 2017	- / -	- / -	- / -	3 / 0.514	- / -	3 / 0.514	- / -	- / -	- / -	- / -	- / -	3 / 0.514
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.630	3 / 0.630
Total	4 / 0.551	- / -	- / -	8 / 1.469	- / -	8 / 1.469	- / -	- / -	- / -	- / -	3 / 0.630	15 / 2.650

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	-	-	-	-	-	-	-	5	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	15
Out	4	-	-	-	-	-	-	-	-	5	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	15

Footnotes:

(13) FLIR installs take 2 weeks to complete. FY17 scheduled installations will be completed consecutively by alteration installation teams (AIT).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0981 / Items less than \$5 Million				Modification Number / Title: 10 / LT318 - Carriers Passive Countermeasures System (PCMS)				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	23.826	11.290	21.110	20.200	-	20.200	23.225	19.450	3.400	-	-	122.501
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	23.826	11.290	21.110	20.200	-	20.200	23.225	19.450	3.400	-	-	122.501
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	23.826	11.290	21.110	20.200	-	20.200	23.225	19.450	3.400	-	-	122.501
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Classified effort.

[PCMS] Fielding Plan as follows: FY15 (1 ship), FY16 (2), FY17 (1), FY18 (3), FY19 (1), FY20 (1). Avails that start in 1st qtr or early 2nd qtr will require funding in the previous FY to award AIT and support contracts.

Additionally, some funding is required post avail for post avail testing.

PEO CV PCMS funding is solely for installation. Procurement of material is done separately via a different sponsor and program office. Material is provided as GFE at the start of the availability.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0981 / Items less than \$5 Million					Modification Number / Title: 10 / LT318 - Carriers Passive Countermeasures System (PCMS)				
Models of Systems Affected: Carrier PCMS				Modification Type: TBD				Related RDT&E PEs:						
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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														
<i>Modification Item 1 of 1: LT318 - Carriers Passive Countermeasures System (PCMS)</i>														
B Kits														
Recurring														
1.1.1) PCMS - Organic	- / 23.826	- / 11.290	- / 21.110	- / 20.200	- / -	- / 20.200	- / 23.225	- / 19.450	- / 3.400	- / -	- / -	- / 122.501		
<i>Subtotal: Recurring</i>	- / 23.826	- / 11.290	- / 21.110	- / 20.200	- / -	- / 20.200	- / 23.225	- / 19.450	- / 3.400	- / -	- / -	- / 122.501		
<i>Subtotal: LT318 - Carriers Passive Countermeasures System (PCMS)</i>	- / 23.826	- / 11.290	- / 21.110	- / 20.200	- / -	- / 20.200	- / 23.225	- / 19.450	- / 3.400	- / -	- / -	- / 122.501		
<i>Subtotal: Procurement, All Modification Items</i>	- / 23.826	- / 11.290	- / 21.110	- / 20.200	- / -	- / 20.200	- / 23.225	- / 19.450	- / 3.400	- / -	- / -	- / 122.501		
Installation														
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -		
Total														
Total Cost (Procurement + Support + Installation)	23.826	11.290	21.110	20.200	-	20.200	23.225	19.450	3.400	-	-	122.501		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 10 / LT318 - Carriers Passive Countermeasures System (PCMS)

Modification Item 1 of 1: LT318 - Carriers Passive Countermeasures System (PCMS)

Manufacturer Information

Manufacturer Name: New MFG - Name	Manufacturer Location: New MFG - Loc
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 0

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

--	--	--	--	--	--	--	--

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 11 / LT319 - JSF Support - Heavy Unrep
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	0.838	3.045	3.045	2.207	6.300	15.435
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	0.838	3.045	3.045	2.207	6.300	15.435
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	0.838	3.045	3.045	2.207	6.300	15.435

(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:

Installation of Heavy UNREP (Heavy E-Stream) capability on CVN 68 Class Carriers is required to facilitate connected replenishment of F-35 engine Power Modules and Lift Fans. The F-35 engine, power module and lift fan each exceed size and weight capabilities of the current CVN 68 Class UNREP system.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 11 / LT319 - JSF Support - Heavy Unrep

Models of Systems Affected: Heavy UNREP (Heavy E-Stream)	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> LT319 - JSF Support - Heavy Unrep												
B Kits												
Recurring												
1.1.1) Heavy Unrep Heavy E-Stream - NonOrganic ⁽¹⁴⁾	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.720	1 / 0.720	1 / 0.720	- / -	2 / 1.500	5 / 3.660
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.720	- / 0.720	- / 0.720	- / -	- / 1.500	- / 3.660
<i>Subtotal: LT319 - JSF Support - Heavy Unrep</i>	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.720	1 / 0.720	1 / 0.720	- / -	2 / 1.500	5 / 3.660
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.720	- / 0.720	- / 0.720	- / -	- / 1.500	- / 3.660
Installation												
<i>Modification Item 1 of 1:</i> LT319 - JSF Support - Heavy Unrep	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.118	- / 2.325	- / 2.325	- / 2.207	- / 4.800	- / 11.775
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.118	- / 2.325	- / 2.325	- / 2.207	- / 4.800	- / 11.775
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	0.838	3.045	3.045	2.207	6.300	15.435

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 11 / LT319 - JSF Support - Heavy Unrep

Modification Item 1 of 1: LT319 - JSF Support - Heavy Unrep

Manufacturer Information

Manufacturer Name: TBD ⁽¹⁵⁾				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 9			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: Heavy Unrep Heavy E-Stream

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.207	- / -	- / -	- / -	1 / 2.207
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.118	- / -	1 / 2.207	- / -	- / -	1 / 2.325
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.118	- / -	1 / 2.207	- / -	1 / 2.325
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.118	- / -	2 / 4.800	2 / 4.918
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.118	1 / 2.325	1 / 2.325	1 / 2.207	2 / 4.800	5 / 11.775

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	2	5
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	3	5	

Footnotes:

⁽¹⁴⁾ Installation of Heavy UNREP (Heavy E-Stream) capability on CVN 68 Class Carriers is required to facilitate connected replenishment of F-35 engine Power Modules and Lift Fans. The F-35 engine, power module and lift fan each exceed size and weight capabilities of the current CVN 68 Class UNREP system. Changes from PB 16: Fielding plan shifted to the right to align with proposed F-35 fleet introduction dates. As a result, the Department realigned \$0.8M to the FY16 Machinery Plant Upgrades effort.

⁽¹⁵⁾ Awaiting identification of manufacturer

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 12 / LT322 - LSD Boat Davit
---	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	2.355	7.058	9.069	-	9.069	8.817	6.743	6.798	9.079	-	49.919
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	2.355	7.058	9.069	-	9.069	8.817	6.743	6.798	9.079	-	49.919
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	2.355	7.058	9.069	-	9.069	8.817	6.743	6.798	9.079	-	49.919

(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:

[FMP Ship Units - LSD Davit] This SHIPALT replaces the Welin Lambie LUM 12A or Lakeshore Gravity Boat Davit currently installed on LSD 41/49 Class ships, with a new Slewing Arm Davit (SLAD) from Oldenburg Group Inc. The existing systems will be removed and the OGI SLAD will be installed in the same general location of the current systems. The new system is a SLAD design with single point pick up of the boats versus the two point pick up used by the existing systems.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0981 / Items less than \$5 Million					Modification Number / Title: 12 / LT322 - LSD Boat Davit			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: LT322 - LSD Boat Davit</i>													
B Kits													
Recurring													
1.1.1) FMP Ship Units - LSD Davit - NonOrganic ⁽¹⁶⁾	- / -	1 / 1.191	2 / 2.427	2 / 3.466	- / -	2 / 3.466	2 / 3.017	1 / 1.515	2 / 3.088	- / -	- / -	10 / 14.704	
1.1.2) End Item Spares - Organic - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.111	- / -	2 / 3.111	
<i>Subtotal: Recurring</i>	- / 0.000	- / 1.191	- / 2.427	- / 3.466	- / -	- / 3.466	- / 3.017	- / 1.515	- / 3.088	- / 3.111	- / -	- / 17.815	
<i>Subtotal: LT322 - LSD Boat Davit</i>	- / -	1 / 1.191	2 / 2.427	2 / 3.466	- / -	2 / 3.466	2 / 3.017	1 / 1.515	2 / 3.088	2 / 3.111	- / -	12 / 17.815	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 1.191	- / 2.427	- / 3.466	- / -	- / 3.466	- / 3.017	- / 1.515	- / 3.088	- / 3.111	- / -	- / 17.815	
Installation													
<i>Modification Item 1 of 1: LT322 - LSD Boat Davit</i>													
<i>Subtotal: Installation</i>	- / 0.000	- / 1.164	- / 4.631	- / 5.603	- / -	- / 5.603	- / 5.800	- / 5.228	- / 3.710	- / 5.968	- / -	- / 32.104	
Total													
Total Cost (Procurement + Support + Installation)	0.000	2.355	7.058	9.069	-	9.069	8.817	6.743	6.798	9.079	-	49.919	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 12 / LT322 - LSD Boat Davit

Modification Item 1 of 1: LT322 - LSD Boat Davit

Manufacturer Information

Manufacturer Name: Oldenburg Group Inc	Manufacturer Location: Iron River, MI
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 10

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Apr 2015	Jan 2016	Jun 2017				
Delivery Dates	Feb 2016	Nov 2016	Apr 2018				

Installation Information

Method of Implementation: Industrial/AIT:: Installation Name: FMP Ship Units - LSD Davit

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / 1.164	1 / 2.560	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.724
FY 2016	- / -	- / -	- / 2.071	2 / 4.305	- / -	2 / 4.305	- / -	- / -	- / -	- / -	- / -	2 / 6.376
FY 2017	- / -	- / -	- / -	- / 0.971	- / -	- / 0.971	2 / 4.023	- / -	- / -	- / -	- / -	2 / 4.994
FY 2018	- / -	- / -	- / -	- / 0.327	- / -	- / 0.327	- / 1.370	2 / 3.897	- / -	- / -	- / -	2 / 5.594
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.407	- / 0.743	1 / 2.348	- / -	- / -	1 / 3.498
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.588	- / 1.362	2 / 5.968	- / -	2 / 7.918
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / 1.164	1 / 4.631	2 / 5.603	- / -	2 / 5.603	2 / 5.800	2 / 5.228	1 / 3.710	2 / 5.968	- / -	10 / 32.104

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	1	-	-	1	-	-	1	-	-	-	1	1	-	1	1	-	-	1	-	-	-	-	-	2	-	10
Out	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	1	1	1	-	-	1	-	-	1	-	-	-	2	10

Method of Implementation (Organic): End Item Spares - Organic **Installation Quantity:** 2

Footnotes:

⁽¹⁶⁾ FY15 installation funds are required for DSA, Advanced Planning, Shipyard Long Lead Time Material (LLTM), Integrated Logistics Support (ILS) and In-Service Engineering Agent (ISEA). FY17 Procurement costs higher for performing shock and vibration testing, procurement of training simulator and increase Davit procurement cost on new procurement contract. FY17, 18 and 19 costs include additional shipping and In-service Engineering Agent (ISEA) support for Sasebo Japan installs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0981 / Items less than \$5 Million				Modification Number / Title: 13 / LT321 ESB SOF Backfit				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	19.547	2.712	-	2.712	22.300	-	-	-	-	44.559
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	19.547	2.712	-	2.712	22.300	-	-	-	-	44.559
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	19.547	2.712	-	2.712	22.300	-	-	-	-	44.559

(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:

Funds provided for ESB Special Operation Forces (SOF) component. ESB 3 SOF component will be procured and installed in 1 year to support an operational requirement to deploy NLT September 2016. Efforts include ship changes necessary to add radio infrastructure and increase bandwidth capacity, ship changes required to make ESB compatible with night vision devices, and ship changes to add additional aircraft operating spots. Other efforts include ship changes and services for additional Twenty-foot Equivalent Unit (TEU) capacity, increased medical services (shock/triage/forward resuscitative surgery system), and capacity for storage/fueling capability for 4000 gallons of MOGAS. ESB SOF component will procure in FY 17 with installation in FY18 after 2QFY18 ship delivery.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy								Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0981 / Items less than \$5 Million				Modification Number / Title: 13 / LT321 ESB SOF Backfit					
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> LT321 ESB SOF Backfit													
B Kits													
Recurring													
2.1.1) LT321 ESB SOF .- NonOrganic	- / -	- / -	1 / 12.347	1 / 2.712	- / -	1 / 2.712	1 / 11.921	- / -	- / -	- / -	- / -	3 / 26.980	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 12.347	- / 2.712	- / -	- / 2.712	- / 11.921	- / -	- / -	- / -	- / -	- / 26.980	
<i>Subtotal: LT321 ESB SOF Backfit</i>	- / -	- / -	1 / 12.347	1 / 2.712	- / -	1 / 2.712	1 / 11.921	- / -	- / -	- / -	- / -	3 / 26.980	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 12.347	- / 2.712	- / -	- / 2.712	- / 11.921	- / -	- / -	- / -	- / -	- / 26.980	
Installation													
<i>Modification Item 1 of 1:</i> LT321 ESB SOF Backfit	- / 0.000	- / -	- / 17.200	- / -	- / -	- / -	- / 10.379	- / -	- / -	- / -	- / -	- / 17.579	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 17.200	- / -	- / -	- / -	- / 10.379	- / -	- / -	- / -	- / -	- / 17.579	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	19.547	2.712	-	2.712	22.300	-	-	-	-	44.559	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 13 / LT321 ESB SOF Backfit

Modification Item 1 of 1: LT321 ESB SOF Backfit

Manufacturer Information

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

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: LT321 ESB SOF .

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	1 / 7.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 7.200
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.085	- / -	- / -	- / -	- / -	1 / 2.085
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.294	- / -	- / -	- / -	- / -	1 / 8.294
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 7.200	- / -	- / -	- / -	2 / 10.379	- / -	- / -	- / -	- / -	3 / 17.579

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0981 / Items less than \$5 Million				Modification Number / Title: 14 / LT327 - Modular Refrigeration System.				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	3.400	-	3.400	4.267	-	-	-	-	7.667
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	3.400	-	3.400	4.267	-	-	-	-	7.667
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	3.400	-	3.400	4.267	-	-	-	-	7.667
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[Modular Reefer System] Modular Refrigeration System (MRS) replaces the existing legacy ship's stores refrigeration system (SSRS) onboard CVN68 class carriers. The legacy system is energy inefficient, space inefficient, and maintenance intensive, requiring highly skilled personnel to operate and maintain acceptable box temperatures. Most hardware associated with the legacy systems is specialized mil-spec and is either becoming unsupportable due to obsolescence, or is grossly expensive to maintain. Each Modular Refrigeration System (MRS) is comprised of a Modular Refrigeration Unit (MRU), an operating/diagnostic control panel, and small chilled water cooled flat-plate condenser. There are 15 MRUs required per hull. Modular Refrigeration Systems (MRS's) are self-contained hatchable modular refrigeration units (MRU) with a dedicated control panel that eliminate 90% of current maintenance requirements and require minimal operator support/training.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 14 / LT327 - Modular Refrigeration System.

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> LT327 - Modular Refrigeration System.												
B Kits												
Recurring												
1.1.1) Modular Reefer System - NonOrganic ⁽¹⁷⁾	- / -	- / -	- / -	15 / 3.400	- / -	15 / 3.400	- / -	- / -	- / -	- / -	- / -	15 / 3.400
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 3.400	- / -	- / 3.400	- / -	- / -	- / -	- / -	- / -	- / 3.400
<i>Subtotal: LT327 - Modular Refrigeration System.</i>	- / -	- / -	- / -	15 / 3.400	- / -	15 / 3.400	- / -	- / -	- / -	- / -	- / -	15 / 3.400
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 3.400	- / -	- / 3.400	- / -	- / -	- / -	- / -	- / -	- / 3.400
Installation												
<i>Modification Item 1 of 1:</i> LT327 - Modular Refrigeration System.	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 4.267	- / -	- / -	- / -	- / -	- / 4.267
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 4.267	- / -	- / -	- / -	- / -	- / 4.267
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	-	3.400	-	3.400	4.267	-	-	-	-	7.667

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0981 / Items less than \$5 Million	Modification Number / Title: 14 / LT327 - Modular Refrigeration System.

Modification Item 1 of 1: LT327 - Modular Refrigeration System.

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 10

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Dec 2016				
Delivery Dates			Oct 2017				

Installation Information

Method of Implementation: AIT:: Installation Name: Modular Reefer System

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	15 / 4.267	- / -	- / -	- / -	- / -	15 / 4.267
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	15 / 4.267	- / -	- / -	- / -	- / -	15 / 4.267

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

(17) FY17 funding is for the procurement and installation of an entire Shipset of Modular Refrigeration Systems. Install planned for FY18 on board CVN68. Current system performance on CVN68 CL ships has made replacement of the existing legacy system critical.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0989 / Chemical Warfare Detectors

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	42.424	2.937	3.027	2.873	-	2.873	3.034	3.072	3.143	3.207	22.500	86.217
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	42.424	2.937	3.027	2.873	-	2.873	3.034	3.072	3.143	3.207	22.500	86.217
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	42.424	2.937	3.027	2.873	-	2.873	3.034	3.072	3.143	3.207	22.500	86.217

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

CHEMICAL & BIOLOGICAL DEFENSE PROGRAM (INSTALLATION REQUIREMENTS):

Public Law 103-160, Section 1703 created a Joint Service Chemical and Biological Defense Program (CBDP) to address ever growing threats from the aggressive proliferation of chemical and biological weapons. Joint CBDP funds the development and procurement of Chemical and Biological Defense (CBD) Equipment to enhance the warfighter's ability to survive and complete their mission in a chemical biological contaminated environment. The Navy is responsible for the associated installation/integration and sustainment funds only. The Navy's requirement for Joint Biological Point Detection System (JBPDS), Improved Point Detection System/Lifecycle Replacement (IPDS/LR), Joint Biological Agent Identification and Diagnostic System (JBAIDS), and Chemical Biological Radiological Nuclear (CBRN) Dismounted Reconnaissance Sets, Kits, and Outfits (DR SKO) has been validated by CNO in associated Joint Operational Requirements Documents.

Installation of Equipment

Funding is for installation of equipment including Fleet Modernization Program installations, installation of training equipment and installation of equipment in other shore facilities. Procurement of equipment is funded by the Joint Service CBDP.

Detector installation costs can vary significantly, even within ship class, depending on installation location (East coast, West coast, OCONUS, etc.), if installation accomplished pier side or in a ship yard (i.e. availability type during which installation actually occurs), ship as built and as found conditions, and installation growth work (i.e. unplanned/unexpected work) driven by as found conditions.

[P3A / CW001 CHEMICAL WARFARE PROGRAM IPDS/LR]: IPDS-LR plan -

- FY16 installations include one (1) MCM Class ship at \$198.6K, one (1) LHD-1 Class ship at \$200.2K, one (1) LSD 41 Class ship at \$193.4K, two (2) CG-47 Class ships at \$205K each, three (3) DDG-51 Class ships at \$166.4K each, one (1) LCC-19 Class ship at \$193.4K, and one (1) LCS Class ship at \$283.9K. Total installation costs for IPDS-LR in FY16 is \$1,979K for ten (10) ships.
 - FY17 installations include one (1) MCM Class ship at \$195.3K, two (2) LHD-1 Class ship at \$194.5K, one (1) LPD-17 Class ship at \$158.4K, three (3) LSD-49 Class ships at \$195.4K each, one (1) CG-47 Class ships at \$193.1K each, one (1) LCS Class ship at \$272.9K, and one (1) CVN-68 Class ship at \$192K. Total installation costs for IPDS-LR in FY17 is \$1,987K for ten (10) ships.

[P3A / IPDS/LR]: The IPDS/LR (formerly SEACADS/IPDS) will improve the existing shipboard point detection system for detecting and identifying chemical nerve and blister agent contamination presence. Inventory objective for shipboard installations is 133.

[P3A - 2 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS]: JBAIDS plan -

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment		P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>- FY16 installations include one (1) LHA-6 Class ship at \$72.4K and one (1) CVN-68 Class ship at \$72.4K. Total installation costs for JBAIDS in FY16 is \$144.8K for two (2) ships.</p> <p>[P3A - 2 / JBAIDS]: The JBAIDS will provide U.S. operating forces with a biological organism identification and diagnostic device that will identify and quantify biological organisms of operational concern and other pathogens of clinical significance for confirmatory and prognostic purposes. Inventory objective for shipboard JBAIDS installations is 23 and Refrigeration installations is 17.</p> <p>[P3A - 3 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE]: JBAIDS Hardware Upgrade plan - - FY17 installation includes one (1) CVN-68 Class ship at \$84.2K.</p> <p>[P3A - 4 / JBPDS BLK 1]: The JBPDS Block I will provide the Navy with automated, knowledge-based capability to detect and identify biological warfare agents in less than 20 minutes. The inventory objective for shipboard installations is 81.</p> <p>[P3A - 5 / DRSKO Stowage]: DRSKP plan - - FY16 installation includes two (2) DDG Class ships at \$188K each, totaling \$376K for two (2) ships. - FY17 installation includes two (2) DDG Class ships at \$174.7K each, totaling \$349.5K for two (2) ships.</p> <p>[P3A - 5 / DRSKO Stowage]: The CBRN DRSKO consists of portable, commercial and government off-the-shelf equipment which provides Visit Board Search and Seizure (VBSS) forces with the capability to detect or deny the presence of Weapons of Mass Destruction (WMD) in support of WMD Interdiction (WMD-I) missions. The inventory objective for shipboard installations is 116.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0989 / Chemical Warfare Detectors

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / CW001 CHEMICAL WARFARE PROGRAM IPDS/LR (TBD)			- / 11.314	- / 2.848	- / 2.506	- / 2.439	- / -	- / 2.439
P-3a	2 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS (TBD)			- / 4.948	- / -	- / 0.145	- / -	- / -	- / -
P-3a	3 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE (TBD)			- / 1.607	- / 0.089	- / -	- / 0.084	- / -	- / 0.084
P-3a	4 / CW001 CHEMICAL WARFARE PROGRAM JBPDS BLK 1 (TBD)			- / 24.485	- / -	- / -	- / -	- / -	- / -
P-3a	5 / DRSKO Stowage (TBD)			- / 0.070	- / -	- / 0.376	- / 0.350	- / -	- / 0.350
P-40	Total Gross/Weapon System Cost			- / 42.424	- / 2.937	- / 3.027	- / 2.873	- / -	- / 2.873

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / CW001 CHEMICAL WARFARE PROGRAM IPDS/LR (TBD)			- / 2.836	- / 1.637	- / 0.626	- / 0.428	- / 1.540	- / 26.174
P-3a	2 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS (TBD)			- / 0.090	- / -	- / -	- / -	- / -	- / 5.183
P-3a	3 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE (TBD)			- / -	- / -	- / -	- / -	- / 0.002	- / 1.782
P-3a	4 / CW001 CHEMICAL WARFARE PROGRAM JBPDS BLK 1 (TBD)			- / 0.108	- / 1.435	- / 1.500	- / -	- / -	- / 27.528
P-3a	5 / DRSKO Stowage (TBD)			- / -	- / -	- / 1.017	- / 2.779	- / 20.958	- / 25.550
P-40	Total Gross/Weapon System Cost			- / 3.034	- / 3.072	- / 3.143	- / 3.207	- / 22.500	- / 86.217

*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.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors				Modification Number / Title: 1 / CW001 CHEMICAL WARFARE PROGRAM IPDS/LR				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	11.314	2.848	2.506	2.439	-	2.439	2.836	1.637	0.626	0.428	1.540	26.174
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	11.314	2.848	2.506	2.439	-	2.439	2.836	1.637	0.626	0.428	1.540	26.174
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	11.314	2.848	2.506	2.439	-	2.439	2.836	1.637	0.626	0.428	1.540	26.174
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPNAVINST 3400.10G articulates U.S. Navy Chemical, Biological and Radiological Defense (CBRD) policy and establishes functional responsibilities to ensure the highest level of the Fleet readiness and warfighting sustainability in a CBR environment. CBRD IPDS/LR will improve the existing shipboard point detection system for detecting and identifying chemical nerve and blister agent contamination presence. The equipment procurement is funded out of the Joint Service CBBD Budget.

[IPDS/LR] Remarks: Total installations from prior years to FY 2015 reduced to seventy (70) vice seventy three (73) due to higher than planned cost on LHD 6 and CVN 76 Install cost. Because of obsolescence issues with IPDS that are now projected to make the system unsustainable starting in FY20, the IPDS/LR installation schedule has been accelerated and prioritized over JBPDS installation. Planned installations increased by two (2), from 131 to 133, with the addition of LCS-2 and 4, which the LCS program office were unable to install during ship construction. Considerable schedule changes occurred due to the extended CG/LSD Phased Modernization currently planned for certain ships in those classes, extending planned completion of IPDS-LR installations in FY25.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors					Modification Number / Title: 1 / CW001 CHEMICAL WARFARE PROGRAM IPDS/LR			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> CW001 CHEMICAL WARFARE PROGRAM IPDS/LR													
B Kits													
Recurring													
1.1.1) IPDS/LR - NonOrganic ⁽¹⁾	70 / 0.000	15 / -	10 / -	10 / -	- / -	10 / -	12 / -	7 / -	2 / -	2 / -	5 / -	133 / -	
1.1.2) DSA COST - NonOrganic	- / -	- / 0.590	- / 0.527	- / 0.452	- / -	- / 0.452	- / 0.429	- / 0.204	- / 0.211	- / -	- / 0.520	- / 2.933	
<i>Subtotal: Recurring</i>	- / 0.000	- / 0.590	- / 0.527	- / 0.452	- / -	- / 0.452	- / 0.429	- / 0.204	- / 0.211	- / -	- / 0.520	- / 2.933	
<i>Subtotal: CW001 CHEMICAL WARFARE PROGRAM IPDS/LR</i>	70 / 0.000	15 / 0.590	10 / 0.527	10 / 0.452	- / -	10 / 0.452	12 / 0.429	7 / 0.204	2 / 0.211	2 / -	5 / 0.520	133 / 2.933	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 0.590	- / 0.527	- / 0.452	- / -	- / 0.452	- / 0.429	- / 0.204	- / 0.211	- / -	- / 0.520	- / 2.933	
Installation													
<i>Modification Item 1 of 1:</i> CW001 CHEMICAL WARFARE PROGRAM IPDS/LR	- / 11.314	- / 2.258	- / 1.979	- / 1.987	- / -	- / 1.987	- / 2.407	- / 1.433	- / 0.415	- / 0.428	- / 1.020	- / 23.241	
<i>Subtotal: Installation</i>	- / 11.314	- / 2.258	- / 1.979	- / 1.987	- / -	- / 1.987	- / 2.407	- / 1.433	- / 0.415	- / 0.428	- / 1.020	- / 23.241	
Total													
Total Cost (Procurement + Support + Installation)	11.314	2.848	2.506	2.439	-	2.439	2.836	1.637	0.626	0.428	1.540	26.174	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors	Modification Number / Title: 1 / CW001 CHEMICAL WARFARE PROGRAM IPDS/LR

Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM IPDS/LR

Manufacturer Information

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

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: IPDS/LR

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	62 / 11.314	8 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	70 / 11.314
FY 2015	- / -	10 / 2.258	5 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 2.258
FY 2016	- / -	- / -	9 / 1.979	1 / -	- / -	1 / -	- / -	- / -	- / -	- / -	- / -	10 / 1.979
FY 2017	- / -	- / -	- / -	10 / 1.987	- / -	10 / 1.987	- / -	- / -	- / -	- / -	- / -	10 / 1.987
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.407	2 / -	- / -	- / -	- / -	12 / 2.407
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 1.433	- / -	- / -	- / -	7 / 1.433
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.415	- / -	- / -	2 / 0.415
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.428	- / -	2 / 0.428
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.020	5 / 1.020
Total	62 / 11.314	18 / 2.258	14 / 1.979	11 / 1.987	- / -	11 / 1.987	10 / 2.407	9 / 1.433	2 / 0.415	2 / 0.428	5 / 1.020	133 / 23.241

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	62	7	6	2	3	4	4	3	3	4	3	2	2	1	3	3	3	4	2	2	1	-	1	1	-	-	1	-	1	5	133
Out	62	7	6	2	3	4	4	3	3	4	3	2	2	1	3	3	3	4	2	2	1	-	1	1	-	-	1	-	1	5	133

Footnotes:
 (1) IPDS-LR plan - The procurement costs are specifically referring to Installation and Design Service Allocation (DSA) costs as there are no equipment procurement costs with any detector system installed. DSA costs are for government engineering oversight/support in preparation for ship installation and ship class planning yards for engineering services which include ship check, development and approval of ship installation drawings (SIDs), Ship Selected Record changes, Bill of Material (BOM), onsite planning yard engineering support during installation to answer liaison action record (LARs), and other engineering services depending on the planning yard. DSA costs are generally funded up to one year prior to planned installation due to drawing development lead time and installation preparation efforts. These costs are ship specific since drawings are developed for each ship, not class of ship, excluding IPDS-LR for DDG Class ships which are class-wide drawings. - FY16 installations include one (1) MCM Class ship at

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors	Modification Number / Title: 1 / CW001 CHEMICAL WARFARE PROGRAM IPDS/LR
<p>\$198.6K, one (1) LHD-1 Class ship at \$200.2K, one (1) LSD 41 Class ship at \$193.4K, two (2) CG-47 Class ships at \$205K each, three (3) DDG-51 Class ships at \$166.4K each, one (1) LCC-19 Class ship at \$193.4K, and one (1) LCS Class ship at \$283.9K. Total installation costs for IPDS-LR in FY16 is \$1,979K for ten (10) ships. - FY17 installations include one (1) MCM Class ship at \$195.3K, two (2) LHD-1 Class ship at \$194.5K, one (1) LPD-17 Class ship at \$158.4K, three (3) LSD-49 Class ships at \$195.4K each, one (1) CG-47 Class ships at \$193.1K each, one (1) LCS Class ship at \$272.9K, and one (1) CVN-68 Class ship at \$192K. Total installation costs for IPDS-LR in FY17 is \$1,987K for ten (10) ships.</p>		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors				Modification Number / Title: 2 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4.948	-	0.145	-	-	-	0.090	-	-	-	-	5.183
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4.948	-	0.145	-	-	-	0.090	-	-	-	-	5.183
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4.948	-	0.145	-	-	-	0.090	-	-	-	-	5.183
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPNAVINST 3400.10G articulates U.S. Navy CBRD policy and establishes functional responsibilities to ensure the highest level of the Fleet readiness and warfighting sustainability in a CBR environment. JBAIDS systems will identify and quantify biological organisms of operational concern and other pathogens of clinical significance for confirmatory and prognostic purposes. The CENTCOM HR urgent need (dated Aug 2009) modifies the JBAIDS ORD (dated May 2003) with the addition of detection capability for the 2009/A/H1N1 influenza. The equipment procurement is funded out of the Joint Service CDBP Budget P-1 Item Nomenclature: JBAIDS. Beginning in FY13, system will install with refrigeration unit.

[JBAIDS] Remarks: A total of 20 completed of 21 previously planned. The planned CVN-71 installation shifted from Q3 FY15 to FY16 due to ship availability. Two (2) additional ships have been added to the plan because the LHA 6 and LHA 7 programs were not able to install JBAIDS during construction. The total is now 23 ships. LHA 8 has successfully added JBAIDS to the baseline and should have the system installed during construction.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors					Modification Number / Title: 2 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS			
Models of Systems Affected: [No Model Specified]			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBAIDS</i>													
B Kits													
Non-Recurring													
1.1.1) JBAIDS - NonOrganic ⁽²⁾	20 / 0.000	- / -	2 / -	- / -	- / -	- / -	1 / -	- / -	- / -	- / -	- / -	23 / -	
<i>Subtotal: Non-Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: CW001 CHEMICAL WARFARE PROGRAM JBAIDS</i>	20 / 0.000	- / -	2 / -	- / -	- / -	- / -	1 / -	- / -	- / -	- / -	- / -	23 / -	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Installation													
<i>Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBAIDS</i>	- / 4.948	- / -	- / 0.145	- / -	- / -	- / -	- / 0.090	- / -	- / -	- / -	- / -	- / 5.183	
<i>Subtotal: Installation</i>	- / 4.948	- / -	- / 0.145	- / -	- / -	- / -	- / 0.090	- / -	- / -	- / -	- / -	- / 5.183	
Total													
Total Cost (Procurement + Support + Installation)	4.948	-	0.145	-	-	-	0.090	-	-	-	-	5.183	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors	Modification Number / Title: 2 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS

Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBAIDS

Manufacturer Information							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: JBAIDS

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	20 / 4.948	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	20 / 4.948
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	2 / 0.145	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.145
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.090	- / -	- / -	- / -	- / -	1 / 0.090
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	20 / 4.948	- / -	2 / 0.145	- / -	- / -	- / -	1 / 0.090	- / -	- / -	- / -	- / -	23 / 5.183

Installation Schedule																																
	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	20	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	20	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:
 (2) The procurement costs are specifically referring to Installation and Design Service Allocation (DSA) costs as there are no equipment procurement costs with any detector system installed. DSA costs are for government engineering oversight/support in preparation for ship installation and ship class planning yards for engineering services which include ship check, development and approval of ship installation drawings (SIDs), Ship Selected Record changes, Bill of Material (BOM), onsite planning yard engineering support during installation to answer liaison action record (LARs), and other engineering services depending on the planning yard. DSA costs are generally funded up to one year prior to planned installation due to drawing development lead time and installation preparation efforts. These costs are ship specific since drawings are developed for each ship, not class of ship, excluding IPDS-LR for DDG Class ships which are class-wide drawings.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors				Modification Number / Title: 3 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1.607	0.089	-	0.084	-	0.084	-	-	-	-	0.002	1.782
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1.607	0.089	-	0.084	-	0.084	-	-	-	-	0.002	1.782
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1.607	0.089	-	0.084	-	0.084	-	-	-	-	0.002	1.782
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPNAVINST 3400.10G articulates U.S. Navy CBRD policy and establishes functional responsibilities to ensure the highest level of Fleet readiness and warfighting sustainability in a CBR environment. JBAIDS systems will detect and identify biological organisms of operational concern and other pathogens of clinical significance for confirmatory and prognostic purposes. The CENTCOM HR urgent need (dated Aug 2009) modifies the JBAIDS ORD (dated May 2003) with the addition of detection capability for the 2009/A/H1N1 influenza. This requires the installation of added support equipment, hard-wired freezers. The equipment procurement is funded out of the Joint Service CDBP Budget P-1 Item Nomenclature: JBAIDS.

[JBAIDS REFRIGERATION UPGRADE] Remarks: A total of fifteen (15) completed of seventeen (17) planned. Since last submission, a planned JBAIDS refrigeration upgrade shifted from Q3 FY15 to Q4 FY15 in line with ship availability.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors					Modification Number / Title: 3 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE				
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:						
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total		
	<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>		
Procurement														
<i>Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE</i>														
B Kits														
Recurring														
1.1.1) JBAIDS REFRIGERATION UPGRADE - NonOrganic ⁽³⁾	15 / 0.000	1 / -	- / -	1 / -	- / -	1 / -	- / -	- / -	- / -	- / -	- / -	17 / -		
1.1.2) DSA COST - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.002	- / 0.002		
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.002</i>	<i>- / 0.002</i>		
<i>Subtotal: CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE</i>	<i>15 / 0.000</i>	<i>1 / -</i>	<i>- / -</i>	<i>1 / -</i>	<i>- / -</i>	<i>1 / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.002</i>	<i>17 / 0.002</i>		
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 0.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.002</i>	<i>- / 0.002</i>		
Installation														
<i>Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE</i>														
<i>Subtotal: Installation</i>	<i>- / 1.607</i>	<i>- / 0.089</i>	<i>- / -</i>	<i>- / 0.084</i>	<i>- / -</i>	<i>- / 0.084</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 1.780</i>		
Total														
Total Cost (Procurement + Support + Installation)	1.607	0.089	-	0.084	-	0.084	-	-	-	-	0.002	1.782		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors	Modification Number / Title: 3 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE

Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE

Manufacturer Information

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

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: JBAIDS REFRIGERATION UPGRADE

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	15 / 1.607	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	15 / 1.607
FY 2015	- / -	1 / 0.089	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.089
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	1 / 0.084	- / -	1 / 0.084	- / -	- / -	- / -	- / -	- / -	1 / 0.084
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	15 / 1.607	1 / 0.089	- / -	1 / 0.084	- / -	1 / 0.084	- / -	- / -	- / -	- / -	- / -	17 / 1.780

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	15	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	

Footnotes:

(3) JBAIDS Hardware Upgrade plan - The procurement costs are specifically referring to Installation and Design Service Allocation (DSA) costs as there are no equipment procurement costs with any detector system installed. DSA costs are for government engineering oversight/support in preparation for ship installation and ship class planning yards for engineering services which include ship check, development and approval of ship installation drawings (SIDs), Ship Selected Record changes, Bill of Material (BOM), onsite planning yard engineering support during installation to answer liaison action record (LARs), and

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors	Modification Number / Title: 3 / CW001 CHEMICAL WARFARE PROGRAM JBAIDS REFRIGERATION UPGRADE

other engineering services depending on the planning yard. DSA costs are generally funded up to one year prior to planned installation due to drawing development lead time and installation preparation efforts. These costs are ship specific since drawings are developed for each ship, not class of ship, excluding IPDS-LR for DDG Class ships which are class-wide drawings. - FY17 installation includes one (1) CVN-68 Class ship at \$84.2K.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors				Modification Number / Title: 4 / CW001 CHEMICAL WARFARE PROGRAM JBPDS BLK 1				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	24.485	-	-	-	-	-	0.108	1.435	1.500	-	-	27.528
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	24.485	-	-	-	-	-	0.108	1.435	1.500	-	-	27.528
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	24.485	-	-	-	-	-	0.108	1.435	1.500	-	-	27.528
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPNAVINST 3400.10G articulates U.S. Navy CBRD policy and establishes functional responsibilities to ensure the highest level of Fleet Readiness and warfighting sustainability in a CBR environment. JBPDS BLK I provides for improved biological agent detection and reporting. The JBPDS ORD (J2-B001-Revision 1, dated 7 January, 2002) validates the modification. The equipment procurement is funded out of the Joint CBDP Budget P-1 Item Nomenclature: (JP0100) JBPDS.

[JBPDS BLK 1] Remarks: A total of 74 completed of 82 planned. Due to avail schedule changes, one DDG-77 was removed from the plan and LCS 2 and LCS 4 was added to the plan, resulting in a net increase of one JBPDS installation since PB16 budget submission. Due to a potential for a chemical point detection system capability gap, because of obsolescence issues with IPDS starting in FY20, all JBPDS installations have been stopped as of 4th quarter FY13 to maximize IPDR-LR installations.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors	Modification Number / Title: 4 / CW001 CHEMICAL WARFARE PROGRAM JBPDS BLK 1

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> CW001 CHEMICAL WARFARE PROGRAM JBPDS BLK 1												
B Kits												
Recurring												
1.1.1) JBPDS BLK 1 - NonOrganic ⁽⁴⁾	74 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	4 / -	4 / -	- / -	- / -	82 / -
1.1.2) DSA COST - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.108	- / -	- / -	- / -	- / -	- / 0.108
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.108	- / -	- / -	- / -	- / -	- / 0.108
<i>Subtotal: CW001 CHEMICAL WARFARE PROGRAM JBPDS BLK 1</i>	74 / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.108	4 / -	4 / -	- / -	- / -	82 / 0.108
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.108	- / -	- / -	- / -	- / -	- / 0.108

Installation												
<i>Modification Item 1 of 1:</i> CW001 CHEMICAL WARFARE PROGRAM JBPDS BLK 1	- / 24.485	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.435	- / 1.500	- / -	- / -	- / 27.420
<i>Subtotal: Installation</i>	- / 24.485	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.435	- / 1.500	- / -	- / -	- / 27.420

Total												
Total Cost (Procurement + Support + Installation)	24.485	-	-	-	-	-	0.108	1.435	1.500	-	-	27.528

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors	Modification Number / Title: 4 / CW001 CHEMICAL WARFARE PROGRAM JBPDS BLK 1

Modification Item 1 of 1: CW001 CHEMICAL WARFARE PROGRAM JBPDS BLK 1

Manufacturer Information

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

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: JBPDS BLK 1

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	74 / 24.485	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	74 / 24.485
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.435	- / -	- / -	- / -	4 / 1.435
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.500	- / -	- / -	4 / 1.500
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	74 / 24.485	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.435	4 / 1.500	- / -	- / -	82 / 27.420

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	-	-	-	-	-	82
Out	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	-	-	-	-	-	82

Footnotes:
⁽⁴⁾ The procurement costs are specifically referring to Installation and Design Service Allocation (DSA) costs as there are no equipment procurement costs with any detector system installed. DSA costs are for government engineering oversight/support in preparation for ship installation and ship class planning yards for engineering services which include ship check, development and approval of ship installation drawings (SIDs), Ship Selected Record changes, Bill of Material (BOM), onsite planning yard engineering support during installation to answer liaison action record (LARs), and other engineering services depending on the planning yard. DSA costs are generally funded up to one year prior to planned installation due to drawing development lead time and installation preparation efforts. These costs are ship specific since drawings are developed for each ship, not class of ship, excluding IPDS-LR for DDG Class ships which are class-wide drawings.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors				Modification Number / Title: 5 / DRSKO Stowage				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.070	-	0.376	0.350	-	0.350	-	-	1.017	2.779	20.958	25.550
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.070	-	0.376	0.350	-	0.350	-	-	1.017	2.779	20.958	25.550
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.070	-	0.376	0.350	-	0.350	-	-	1.017	2.779	20.958	25.550

(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:

OPNAVINST 3400.10G articulates U.S. Navy CBRD policy and establishes functional responsibilities to ensure the highest level of the Fleet readiness and warfighting sustainability in a CBR environment. Chemical Biological Radiological Nuclear Dismounted Reconnaissance Sets, Kits, and Outfits (CBRN DRSKO) provides Navy Boarding Teams personnel protection from current and emerging CBRN hazards through detection, identification, sample collection, decontamination, marking, and hazard reporting for CBRN threats. Due to system size and storage requirements of equipment and materials, a ship alteration must be accomplished for adequate shelving, electrical power, ventilation, and stowage space security. The equipment procurement is funded out of the Joint Service CBDP Budget.

[DRSKO Stowage] Remarks: A total of 116 stowage alterations planned. The Navy received 11 low rate DRSKO production systems from the Joint Service CBDP. The DRSKO ship installation drawings have been developed and approved by the ship planning yard, the ship alteration approval is still pending.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors					Modification Number / Title: 5 / DRSKO Stowage			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: DRSKO Stowage</i>													
B Kits													
Recurring													
1.1.1) DRSKO Stowage - NonOrganic ⁽⁵⁾	- / -	- / -	2 / -	2 / -	- / -	2 / -	- / -	- / -	5 / -	12 / -	95 / -	116 / -	
1.1.2) DSA COST - NonOrganic	- / 0.070	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.122	- / 0.379	- / 2.788	- / 3.359	
<i>Subtotal: Recurring</i>	- / 0.070	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.122	- / 0.379	- / 2.788	- / 3.359	
<i>Subtotal: DRSKO Stowage</i>	- / 0.070	- / -	2 / -	2 / -	- / -	2 / -	- / -	- / -	5 / 0.122	12 / 0.379	95 / 2.788	116 / 3.359	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.070	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.122	- / 0.379	- / 2.788	- / 3.359	
Installation													
<i>Modification Item 1 of 1: DRSKO Stowage</i>													
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 0.376	- / 0.350	- / -	- / 0.350	- / -	- / -	- / 0.895	- / 2.400	- / 18.170	- / 22.191	
Total													
Total Cost (Procurement + Support + Installation)	0.070	-	0.376	0.350	-	0.350	-	-	1.017	2.779	20.958	25.550	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0989 / Chemical Warfare Detectors	Modification Number / Title: 5 / DRSKO Stowage

Modification Item 1 of 1: DRSKO Stowage

Manufacturer Information

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

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: DRSKO Stowage

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	2 / 0.376	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.376
FY 2017	- / -	- / -	- / -	2 / 0.350	- / -	2 / 0.350	- / -	- / -	- / -	- / -	- / -	2 / 0.350
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.895	- / -	- / -	5 / 0.895
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.400	- / -	12 / 2.400
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	95 / 18.170	95 / 18.170
Total	- / -	- / -	2 / 0.376	2 / 0.350	- / -	2 / 0.350	- / -	- / -	5 / 0.895	12 / 2.400	95 / 18.170	116 / 22.191

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	1	1	-	-	1	-	1	-	-	-	-	-	-	-	-	1	2	1	1	3	3	3	3	95	116
Out	-	-	-	-	-	-	1	1	-	-	1	-	1	-	-	-	-	-	-	-	-	1	2	1	1	3	3	3	3	95	116

Footnotes:

(5) DRSKP plan - - FY16 installation includes two (2) DDG Class ships at \$188K each, totaling \$376K for two (2) ships. - FY17 installation includes two (2) DDG Class ships at \$174.7K each, totaling \$349.5K for two (2) ships.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment

P-1 Line Item Number / Title:
0990 / Submarine Life Support 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 **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	86.249	8.385	7.399	6.043	-	6.043	10.391	9.640	2.065	2.107	15.364	147.643
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	86.249	8.385	7.399	6.043	-	6.043	10.391	9.640	2.065	2.107	15.364	147.643
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	86.249	8.385	7.399	6.043	-	6.043	10.391	9.640	2.065	2.107	15.364	147.643

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2017 funding request was reduced by \$2.567 million to account for the availability of prior year execution balances.

[P40A / SUBMARINE LIFE SUPPORT SYSTEM]: 5D830 - PRODUCTION ENGINEERING

The review and approval of any production contract technical documentation, or the separate development of this documentation to include, technical manuals, Preventive Maintenance Schedule (PMS), Level III production drawings, Provisioning Technical Documentation (PTD), Program Support Data (PSD) and Allowance Parts Lists (APL); Engineering & support for final design reviews. This work can be accomplished by NSWC PHILA as the in-service engineering agent, other Naval activities or contractors as appropriate.

[P3A / CAMS IIA]: 5D009 - CENTRAL ATMOSPHERE MONITORING SYSTEM (CAMS) IIA

A replacement atmosphere analyzer to replace the current CAMS I units on 688 Class submarines due to obsolescence.

[P3A - 2 / LOW PRESSURE ELECTROLYZER]: 5D010 - THE LOW PRESSURE ELECTROLYZER (LPE) The LPE will replace the Electrolytic Oxygen Generators (EOG) currently being used on SSBN/SSGN Class submarines. The LPE also replaces the Oxygen Generating Plant (OGP) on SSN 21 Class submarines that has become unreliable and expensive to operate. The LPE produces oxygen at low pressure eliminating the need for high pressure oxygen storage. There will be two LPEs on SSBN/SSGN Class submarines and one LPE on SSN 21 Class submarines. There will be a total of 39 LPE units.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 9: Other Shipboard Equipment **P-1 Line Item Number / Title:** 0990 / Submarine Life Support 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 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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 LIFE SUPPORT SYSTEM			- / 6.303	- / 0.084	- / 0.257	- / 0.329	- / -	- / 0.329
P-3a	1 / 5D009 CAMS IIA (TBD)			- / 15.636	- / -	- / 0.100	- / -	- / -	- / -
P-3a	2 / 5D010 LOW PRESSURE ELECTROLYZER (TBD)			- / 64.310	- / 8.301	- / 7.042	- / 5.714	- / -	- / 5.714
P-40	Total Gross/Weapon System Cost			- / 86.249	- / 8.385	- / 7.399	- / 6.043	- / -	- / 6.043

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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 LIFE SUPPORT SYSTEM			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / 5D009 CAMS IIA (TBD)			- / -	- / -	- / -	- / -	- / -	- / 15.736
P-3a	2 / 5D010 LOW PRESSURE ELECTROLYZER (TBD)			- / 10.225	- / 9.540	- / 1.963	- / 1.955	- / 15.264	- / 124.314
P-40	Total Gross/Weapon System Cost			- / 10.391	- / 9.640	- / 2.065	- / 2.107	- / 15.364	- / 147.643

*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.

--	--

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9 **P-1 Line Item Number / Title:** 0990 / Submarine Life Support System **Aggregated Items Title:** SUBMARINE LIFE SUPPORT SYSTEM

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) 5D830 PRODUCTION ENGINEERING																				
1.1) PRODUCTION ENGINEERING	A		-	-	6.303	-	-	0.084	-	-	0.257	-	-	0.329	-	-	-	-	-	0.329
Subtotal: 1) 5D830 PRODUCTION ENGINEERING			-	-	6.303	-	-	0.084	-	-	0.257	-	-	0.329	-	-	-	-	-	0.329
Total			-	-	6.303	-	-	0.084	-	-	0.257	-	-	0.329	-	-	-	-	-	0.329

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0990 / Submarine Life Support System	Modification Number / Title: 1 / 5D009 CAMS IIA
---	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	15.636	-	0.100	-	-	-	-	-	-	-	-	15.736
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	15.636	-	0.100	-	-	-	-	-	-	-	-	15.736
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	15.636	-	0.100	-	-	-	-	-	-	-	-	15.736
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[CAMS IIA] 5D009 - CENTRAL ATMOSPHERE MONITORING SYSTEM (CAMS) IIA
 A replacement atmosphere analyzer to replace the current CAMS I units on 688 Class submarines due to obsolescence.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9					P-1 Line Item Number / Title: 0990 / Submarine Life Support System					Modification Number / Title: 1 / 5D009 CAMS IIA			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: 5D009 CAMS IIA</i>													
B Kits													
Recurring													
1.1.1) CAMS IIA - NonOrganic ⁽¹⁾	32 / 15.636	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 15.636	
<i>Subtotal: Recurring</i>	- / 15.636	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.636	
<i>Subtotal: 5D009 CAMS IIA</i>	32 / 15.636	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 15.636	
<i>Subtotal: Procurement, All Modification Items</i>	- / 15.636	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.636	
Installation													
<i>Modification Item 1 of 1: 5D009 CAMS IIA</i>													
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.100	
Total													
Total Cost (Procurement + Support + Installation)	15.636	-	0.100	-	-	-	-	-	-	-	-	15.736	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0990 / Submarine Life Support System	Modification Number / Title: 1 / 5D009 CAMS IIA

Modification Item 1 of 1: 5D009 CAMS IIA

Manufacturer Information

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

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: CAMS IIA

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	28 / 0.000	- / -	4 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.000	64 / 0.100
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	28 / 0.000	- / -	4 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / -	64 / 0.100

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	28	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	64
Out	28	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	64

Footnotes:

(1) Due to the delays in production and changes in ship availabilities, four CAMS IIA units will be installed in FY16.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0990 / Submarine Life Support System				Modification Number / Title: 2 / 5D010 LOW PRESSURE ELECTROLYZER				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	64.310	8.301	7.042	5.714	-	5.714	10.225	9.540	1.963	1.955	15.264	124.314
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	64.310	8.301	7.042	5.714	-	5.714	10.225	9.540	1.963	1.955	15.264	124.314
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	64.310	8.301	7.042	5.714	-	5.714	10.225	9.540	1.963	1.955	15.264	124.314
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[LOW PRESSURE ELECTROLYZER] The LPE will replace the EOG currently being used on SSBN/SSGN Class submarines. The LPE also replaces the OGP on SSN 21 Class submarines that has become unreliable and expensive to operate. The LPE produces oxygen at low pressure eliminating the need for high pressure oxygen storage. There will be two LPEs on SSBN/SSGN Class submarines and one LPE on SSN 21 Class submarines. There will be a total of 39 LPE units.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9				P-1 Line Item Number / Title: 0990 / Submarine Life Support System						Modification Number / Title: 2 / 5D010 LOW PRESSURE ELECTROLYZER			
Models of Systems Affected: Low Pressure Electrolyzer				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: 5D010 LOW PRESSURE ELECTROLYZER</i>													
B Kits													
Recurring													
1.1.1) LOW PRESSURE ELECTROLYZER - NonOrganic ⁽²⁾	22 / 63.310	3 / 6.801	2 / 6.042	1 / 3.714	- / -	1 / 3.714	3 / 9.225	3 / 8.540	- / -	- / -	5 / 12.264	39 / 109.896	
<i>Subtotal: Recurring</i>	<i>- / 63.310</i>	<i>- / 6.801</i>	<i>- / 6.042</i>	<i>- / 3.714</i>	<i>- / -</i>	<i>- / 3.714</i>	<i>- / 9.225</i>	<i>- / 8.540</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 12.264</i>	<i>- / 109.896</i>	
<i>Subtotal: 5D010 LOW PRESSURE ELECTROLYZER</i>	<i>22 / 63.310</i>	<i>3 / 6.801</i>	<i>2 / 6.042</i>	<i>1 / 3.714</i>	<i>- / -</i>	<i>1 / 3.714</i>	<i>3 / 9.225</i>	<i>3 / 8.540</i>	<i>- / -</i>	<i>- / -</i>	<i>5 / 12.264</i>	<i>39 / 109.896</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 63.310</i>	<i>- / 6.801</i>	<i>- / 6.042</i>	<i>- / 3.714</i>	<i>- / -</i>	<i>- / 3.714</i>	<i>- / 9.225</i>	<i>- / 8.540</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 12.264</i>	<i>- / 109.896</i>	
Installation													
<i>Modification Item 1 of 1: 5D010 LOW PRESSURE ELECTROLYZER</i>	<i>- / 1.000</i>	<i>- / 1.500</i>	<i>- / 1.000</i>	<i>- / 2.000</i>	<i>- / -</i>	<i>- / 2.000</i>	<i>- / 1.000</i>	<i>- / 1.000</i>	<i>- / 1.963</i>	<i>- / 1.955</i>	<i>- / 3.000</i>	<i>- / 14.418</i>	
<i>Subtotal: Installation</i>	<i>- / 1.000</i>	<i>- / 1.500</i>	<i>- / 1.000</i>	<i>- / 2.000</i>	<i>- / -</i>	<i>- / 2.000</i>	<i>- / 1.000</i>	<i>- / 1.000</i>	<i>- / 1.963</i>	<i>- / 1.955</i>	<i>- / 3.000</i>	<i>- / 14.418</i>	
Total													
Total Cost (Procurement + Support + Installation)	64.310	8.301	7.042	5.714	-	5.714	10.225	9.540	1.963	1.955	15.264	124.314	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 9	P-1 Line Item Number / Title: 0990 / Submarine Life Support System	Modification Number / Title: 2 / 5D010 LOW PRESSURE ELECTROLYZER

Modification Item 1 of 1: 5D010 LOW PRESSURE ELECTROLYZER

Manufacturer Information

Manufacturer Name: TREADWELL CORP	Manufacturer Location: CT
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 13

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates	Nov 2014	Nov 2015	Nov 2016	Nov 2017	Nov 2018	Nov 2019	Nov 2020
Delivery Dates	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021

Installation Information

Method of Implementation: Method:: Installation Name: Installation Group Name

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 1.000	3 / 1.500	2 / 1.000	1 / 0.500	- / 0.000	1 / 0.500	- / -	- / -	- / -	- / -	- / 0.000	22 / 4.000
FY 2015	- / -	- / -	- / -	3 / 1.500	- / -	3 / 1.500	- / -	- / -	- / -	- / -	- / -	3 / 1.500
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.000	- / -	- / -	- / -	- / -	2 / 1.000
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.500	- / -	- / -	- / -	1 / 0.500
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.500	2 / 1.019	- / -	- / -	3 / 1.519
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.944	1 / 0.423	- / -	3 / 1.367
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.532	5 / 3.000	5 / 4.532
Total	16 / 1.000	3 / 1.500	2 / 1.000	4 / 2.000	- / -	4 / 2.000	2 / 1.000	2 / 1.000	4 / 1.963	1 / 1.955	5 / 3.000	39 / 14.418

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	2	1	-	-	1	1	-	-	2	2	-	-	1	1	-	-	-	2	-	-	-	4	-	-	-	1	-	5	39
Out	16	-	2	1	-	-	1	1	-	-	2	2	-	-	1	1	-	-	-	2	-	-	-	4	-	-	-	1	-	5	39

Footnotes:

(2) Unexpected ship schedule changes has caused the program the procurement of LPE's ahead of need in prior years. Program expects to have procurement and installation schedules realigned with FY2020 procurement & FY 2021 installation. Installations in FY15 (3 units), FY16 (2 units) and FY17 (1 unit) are prior year procurements.

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	P-1 Line Item Number / Title: 1010 / Reactor Power Units
---	--

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,151.697	298.200	-	-	-	-	323.959	-	-	-	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,151.697	298.200	-	-	-	-	323.959	-	-	-	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,151.697	298.200	-	-	-	-	323.959	-	-	-	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The details of this program are classified CONFIDENTIAL and are submitted to Congress annually in the classified budget justification books.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	P-1 Line Item Number / Title: 1010 / Reactor Power Units
---	--

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Reactor Power Units			- / 1,151.697	- / 298.200	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 1,151.697	- / 298.200	- / -	- / -	- / -	- / -

*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 details of this program are classified CONFIDENTIAL and are submitted to Congress annually in the classified budget justification books.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10 **P-1 Line Item Number / Title:** 1010 / Reactor Power Units **Aggregated Items Title:** Reactor Power Units

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) Reactor Power Units																				
1) Reactor Power Units	A		-	-	1,151.697	-	-	298.200	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 1) Reactor Power Units			-	-	1,151.697	-	-	298.200	-	-	-	-	-	-	-	-	-	-	-	
Total			-	-	1,151.697	-	-	298.200	-	-	-	-	-	-	-	-	-	-	-	

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

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment	P-1 Line Item Number / Title: 1020 / Reactor Components
---	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,049.891	288.822	296.095	342.158	-	342.158	321.745	329.063	299.913	270.773	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,049.891	288.822	296.095	342.158	-	342.158	321.745	329.063	299.913	270.773	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,049.891	288.822	296.095	342.158	-	342.158	321.745	329.063	299.913	270.773	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The details of this program are classified CONFIDENTIAL and are submitted to Congress annually in the classified budget justification books.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 10: Reactor Plant Equipment

P-1 Line Item Number / Title:
1020 / Reactor Components

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

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Reactor Components			- / 1,049.891	- / 288.822	- / 296.095	- / 342.158	- / -	- / 342.158
P-40	Total Gross/Weapon System Cost			- / 1,049.891	- / 288.822	- / 296.095	- / 342.158	- / -	- / 342.158

*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 details of this program are classified CONFIDENTIAL and are submitted to Congress annually in the classified budget justification books.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 10 **P-1 Line Item Number / Title:** 1020 / Reactor Components **Aggregated Items Title:** Reactor Components

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) Reactor Components																				
1.1) Reactor Components	A		-	-	1,049.891	-	-	288.822	-	-	296.095	-	-	342.158	-	-	-	-	-	342.158
Subtotal: 1) Reactor Components			-	-	1,049.891	-	-	288.822	-	-	296.095	-	-	342.158	-	-	-	-	-	342.158
Total			-	-	1,049.891	-	-	288.822	-	-	296.095	-	-	342.158	-	-	-	-	-	342.158

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

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment
---	---

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204561N, 0204454N, 0204423N
--	---	---

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	61.011	10.572	15.982	8.973	-	8.973	8.817	9.007	9.205	9.387	-	132.954
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	61.011	10.572	15.982	8.973	-	8.973	8.817	9.007	9.205	9.387	-	132.954
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	61.011	10.572	15.982	8.973	-	8.973	8.817	9.007	9.205	9.387	-	132.954

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DIVING AND SALVAGE EQUIPMENT:

DIVING: This request provides funding for procurement of modern equipment to replace the Navy's aging diving systems. The demand for divers' services for salvage, ship husbandry, repair and sanitizing work is rapidly increasing. The requested funding buys diving hardware which increases the efficiency and safety of the working diver. Program objectives are to: (1) provide increased safety for diver decompression and better recompression chamber patient monitoring capability, (2) increase underwater ship maintenance capabilities, (3) improve quick response capability, and (4) standardize the configuration of diving systems in the Fleet.

SALVAGE: This request provides program support for the procurement of critical salvage and underwater ship repair items. Public Law 513 (80th Congress, 10 USC 7361 ET SEQ) authorizes the Secretary of the Navy to provide, by contractor or otherwise, necessary salvage and diving equipment, services and facilities for public, private, and military vessels upon such terms and conditions as he may, in his discretion, determine to be in the best interest of the United States.

The U. S. Navy Supervisor of Salvage maintains the Emergency Ship Salvage Material (ESSM) System which consists of a network of bases that maintain, control, and issue material for salvage operations, underwater ship husbandry operations, pollution abatement operations, ocean engineering projects, special authorized projects, and equipment for use in national emergencies. The major bases are located in Williamsburg, Virginia; Stockton, California; Singapore; and Livorno, Italy. Satellite bases having smaller allowances are maintained at Sasebo, Japan; Pearl Harbor, Hawaii; and Bahrain. This system provides the Nation's first line of defense for major pollution abatement operations and the Navy's second line of defense for salvage operations.

[P40A / DIVING (N97)]: The DIVING EQUIPMENT to be procured are:

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering		P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204561N, 0204454N, 0204423N
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / HY106 - LIGHTWEIGHT DIVE SYSTEMS]: This system is completely self-contained, man-portable, and can be deployed from dockside or a ship of opportunity. The system will support two working divers and a standby diver to 190 feet of seawater (FSW) for up to a six hour mission performing ship husbandry, light salvage, and underwater inspection tasks. The Diver Equipment will interface with all Navy certified, air surface supplied diving systems. Required Inventory Objective (I/O) is 2.</p> <p>[P40A / HY107 - PORTABLE RECOMPRESSION CHAMBERS]: The Transportable Recompression Chamber System provides an effective two-man evacuation, transport, treatment, and transfer under pressure capability in order to benefit a diver suffering a pressure related ailment requiring urgent hyperbaric treatment. This is the lightest, most transportable system available to the U. S. Navy. Required I/O is 16.</p> <p>[P40A / HY123 - FLY AWAY DIVE SYSTEMS III HP COMPOSITE FLASK REPLACEMENT]: The FADS III is a matrix of components designed to support manned diving to 850 fsw. It is made up of three major subsystems, the High Pressure (H.P.) Air System, the Mixed Gas System and the Saturation Diving System. The air system consists of a 5000 psi air rack using lightweight composite flasks, a portable diver's air console, and a 5000 psi air compressor packaged for flyaway applications. The mixed gas subsystem consists of H.P. racks for containment of various gas mixes required for diving operations, a mixed gas diving console, and a gas transfer system for charging mixed gas flasks, topside hyperbaric chamber for diver storage and decompression, diving bell and bell handling system. Support equipment includes diver life support items such as diver hot water heaters, hot water suits, dry suits, umbilicals, diver full face masks, small, man-portable, diesel-powered, 5000 psi compressors and diver communication boxes. The matrix concept is designed to provide maximum flexibility in assembling equipment necessary to support a dive mission. Required I/O is 2 High Pressure Air Systems, 95 Mixed Gas Systems, and 2 Fads III Support Equipment.</p> <p>[P40A / HY132 - STANDARD NAVY DOUBLE LOCK RECOMPRESSION CHAMBER (SNDL)]: HY132 Standard Navy Double Lock Recompression Chamber (SNDL): The Standard Navy Double Lock Recompression Chamber is a conventional chamber designed to be built using standard commercial specifications and standards. The SNDL provides a full range of recompression treatment to two patients and two attendants. These chambers are containerized to allow the chamber to be transported and installed for long term operations. These chambers will replace aging and difficult to maintain recompression chambers that will be retired due to fatigue and material flaws. Required I/O is 30.</p> <p>[P40A / HY176 - HP AIR COMPRESSORS]: This item replaces high pressure air compressors in existing divers' life support systems which have reached the end of their service life. Required I/O is 300.</p> <p>[P40A / HY177 - AIR PURIFICATION UNITS]: The Portable Air Monitor Purification Unit is made of 2 subsystems when charging diver's life support system (DLSS) flasks. The Portable Air Monitor Unit can monitor the diver's breathing air in accordance with the requirements of the U.S. Navy Dive Manual. The Portable Air Monitor Purification Unit can be inserted inline of the DLSS to purify the diver's breathing air in accordance with the requirements of the U.S. Navy Dive Manual. The Portable Air Monitor Purification Unit may be used in lieu of the semi-annual diver's air sampling program for breathing air compressors. Required I/O is 50 units.</p> <p>[P40A / HY179 - NAVY EXPERIMENTAL DIVING UNIT]: NEDU's mission is to support the Fleet diver through test and evaluation of diving equipment and procedures as well as hyperbaric systems for NAVSEA, Navy, and DoD activities. Funding is to procure equipment for test, facilities atmospheric control, life support, and physiological systems. These systems not only ensure the safety and lives of NEDU sailors performing experimental dives, but ultimately support the combat readiness and mission success of the Fleet sailors who use the equipment tested at NEDU. Funding is included to support the periodic upgrade of Ocean Simulation Facility (OSF) components. The OSF is the world's largest man-rated hyperbaric chamber affording space for 12 divers in 5 hyperbaric dry chambers, man-rated for dives to 2,250 feet of sea water (1000 psi) with a 50' x 15', 55,000-gallon wet-pot capacity, temperatures from 28 to 104 degrees Fahrenheit, an associated 1.3 million-cubic foot (37 km3) bottle field and uses a fully computerized data instrumentation and collection system. Unit prices vary depending on the specific equipment mix planned for upgrade in any single year.</p> <p>[P40A / HY192 - THERMAL DIVING SUITS]: New technology diving suits which can be used in cold or warm water to maintain a diver in a safe thermal environment. I/O is 1000.</p> <p>[P40A / HY193 - SURFACE SUPPLIED DIVING HELMET]: Replacement helmets for the current MK 21 which have reached the end of their service life. Some helmets will have heads-up displays with visual amplification (diver can see in total blackness). Required I/O is 250.</p> <p>[P40A / HY194 - CONTAMINATED WATER DIVING EQUIPMENT]: Surface supplied diving equipment (helmets, drysuits, umbilicals, surface exhaust consoles, etc.) specially designed for diving in contaminated water. Required I/O is 3.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering		P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204561N, 0204454N, 0204423N
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / HY199 - NAVY DIVE COMPUTER]: The Navy Dive Computer is a diver worn decompression computer, which provides primarily scuba divers with real time calculation of decompression limits/ obligations. I/O is 1400.</p> <p>[P40A / HY207 - EXTREME LIGHTWEIGHT DIVING SYSTEM (XLDS)]: System consists of the Interspiro DIVIATOR DP-1 Surface Supply System combined with the Interspiro DIVIATOR SCUBA System. This is a very lightweight system that allows the portability of SCUBA and some of the benefits of surface supplied diving. Required Inventory Objective I/O is 50.</p> <p>[P40A / HY208 - FLEX CHAMBER TEST ARTICLES]: This is a set of scale test chambers and ancillary equipment necessary in the development of a flexible recompression chamber. Required Inventory Objective I/O is 2.</p> <p>[P40A / HY210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY]: HY 210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY - This is a portable Air Supply that has designated primary and secondary air cylinders with a simple, unregulated control panel. The air supply will provide 3000-5000 psi diver-breathing air to diving life support systems including but not limited to the SNDL, TRCS, FADS III, and LWDS. This is for use in surface supplied diving and hyperbaric treatment operations. Required Inventory Objective I/O is 25.</p> <p>[P40A / HY211 - COMPACT OXYGEN SUPPLY RACK ASSEMBLY (COSRA)]: This is a smaller version of the OSRA Supply Rack Assembly (OSRA) that will have 4 cylinders rather than 9 contained in the OSRA. The rack is anticipated to have 3 primary and 1 secondary cylinders with a simple, unregulated control panel. The rack will provide 3000psi oxygen to either an ORCA, FADS IV, TRCS or I-TRCS. This is for use in surface supplied diving and hyperbaric treatment operations. Required Inventory Objective I/O is 0.</p> <p>[P40A / HY212 - PORTABLE DIVE SYSTEM CONTROL CONSOLE ASSEMBLY (CCA)]: This is a surface supplied diving system that will supply diving breathing gas from the surface to 3 divers. The system is not anticipated to have a volume tank as it will operate on separate high pressure breathing gas sources only. Required Inventory Objective I/O is 20.</p> <p>[P40A / HY213 - HP COMPOSITE FLASK REPLACEMENT]: The flasks used in the CAOS, ASRA, OSRA, HOSRA, CASRA, and COSRA all require replacement after 15 years. NAVSEA 00C has will provide the cylinders to fleet diving commands. Required Inventory Objective I/O is 2500.</p> <p>[P40A / HY222 - 300 FSW NAVY DEEP DOUBLE LOCK RECOMPRESSION CHAMBER]: The 300 FSW Navy Deep Double Lock Recompression Chamber is a conventional chamber designed to be built using standard commercial specifications and standards; however it operates at a significantly higher pressure than the SNDL (HY132). The NDDL provides a full range of recompression treatment for one patient and one attendant down to a depth of 300 FSW. This chamber is containerized to allow the chamber to be transported and installed for long term operations. This chamber will be used to support fly away mixed gas operations utilizing the FMGS as well as deep MK-16 UBA operations where possible. Required Inventory Objective I/O is 1.</p> <p>[P40A / HY224 - SCUBA REGULATORS]: This is 1st and 2nd stage SCUBA regulator fitted with an additional octopus 2nd stage and a console with both a cylinder pressure gauge and diver's depth gauge included. I/O is 5,000.</p> <p>[P40A / HY225 - PRESSURE TEST CHAMBERS]: The pressure test chambers (PTC) have been developed to replace existing PTC's that have reached the end of their useful lifespan. This equipment is a small pressurized chamber with a window and gas supply that allows calibration of diver's depth gauges down to 109 FSW. I/O is 60.</p> <p>[P40A / HY226 FLEX CHAMBER]: This is a flexible recompression chamber used to treat diver's injuries including: Arterial Gas Embolism and Decompression Sickness. This chamber will include a flexible chamber, control console, gas supply and interconnecting hoses. I/O is 36.</p> <p>[P40A / SALVAGE (N9I)]: The SALVAGE EQUIPMENTS to be procured are:</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering		P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204561N, 0204454N, 0204423N
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / HY016 - DECK SYSTEMS]: The deck systems are composed of multiple portable hydraulic systems and components that are designed to handle synthetic line or wire rope to aid in moving or positioning of barges, ships, or other floating elements on the water or items resting on the ocean floor. Deck Systems consist of portable hydraulic driven capstans, portable hydraulic driven winches with horizontal capstans, hydraulic power units, control systems, hydraulic hoses and all ancillary equipment. Required I/O is 34.</p> <p>[P40A / HY043 - OCEANOGRAPHIC UMBILICAL]: The Navy maintains the SWISS, DEEP DRONE, ORION, CURV-21 and MAGNUM remotely operated vehicles for use in hazardous salvage, inspection, and pollution operations. These vehicles are remotely controlled through umbilicals which transmit all command and control functions to the vehicle as well as transmitting all sensor data from the vehicle to the ship. They are procured in different lengths for use in varying ocean depths down to 20,000 feet. The umbilical also acts as the handling line. Required I/O is 16 (12 plus 4 spares).</p> <p>[P40A / HY050 - SYNTHETIC LINES]: This line is used for lifting, mooring, towing, rigging, and in conjunction with the remotely operated vehicles at the salvage site. Required I/O is 123.</p> <p>[P40A / HY062 - ROV SONAR SYSTEMS]: These sonars are used on the SWISS, DEEP DRONE, ORION, and CURV-21 remotely operated vehicles to locate items lost on the sea floor, aircraft debris fields, sunken hull sections, and submerged obstacles. Total I/O is 8 (6 operational plus 2 spares).</p> <p>[P40A / HY116 - PORTABLE SUBMERSIBLE PUMPS]: The submersible salvage pump system is designed move large volumes of fluid at a high discharge pressure resulting is a high lift capacity. The submersible pumps vary in discharge size of 2" to over 24" to meet designated response requirements. Systems are modular packaged for rapid deployment and transportation. Pump assemblies are designed to be used through limited access openings or to be positioned in confined spaces. Submersible salvage pump systems consist of submersible hydraulic pumps (2" to 24"), hydraulic power units, hydraulic hoses, and all ancillary equipment. Required I/O is 94.</p> <p>[P40A / HY136 - 30 KIP FADOSS]: The 30 KIP FADOSS is used to salvage objects from deep water. The primary function is to reduce the dynamic loads that are encountered due to ship motion. These systems will handle recovery of equipment up to a weight of 30,000 pounds. Required I/O 4.</p> <p>[P40A / HY131 - ROV HANDLING SYSTEM]: These systems are used to launch and recover remotely operated vehicles and to tend the deployed cable, compensate for ship motion, monitor cable tension, and store cable. Required I/O is 10 (5 operational and 5 spares).</p> <p>[P40A / HY140 - ROV CONTROL PACKAGE]: The ROV Control Package is used to control the various functions of the SWISS, DEEP DRONE, ORION, and CURV-21 ROVs. Required I/O is 6 (3 operational plus 3 spares).</p> <p>[P40A / HY142 - SALVAGE AIR COMPRESSOR]: The salvage air compressor systems are designed to generate high pressure air to be used by salvage response personnel to accomplish numerous possible salvage actions requiring pneumatic capability, including dewatering of flooded spaces to restore lost buoyancy, inflation of salvage lift bags and pontoons, operation of pneumatic tools and equipment that are employed in the salvage or recovery operation. Salvage Air Compressor Systems consist of multiple capacity diesel powered air compressor units including 125 CFM, 600 CFM, and 5000 psi models, air hoses for the rated air pressure and flow capacity, air manifolds, and all ancillary equipment. Required I/O is 36.</p> <p>[P40A / HY145 - COFFERDAM SYSTEM]: This system will contain a variety of cofferdams necessary to accomplish underwater repair tasks to hull plating, shafts, stern tubes and sea chests on several ship classes. The cofferdams are engineered structural habitats which provide a safe underwater dry environment for divers to work and require very little maintenance. Required I/O is 15.</p> <p>[P40A / HY146 - PROPELLER REPAIR KIT]: These kits will contain the tools necessary to repair minor propeller damage underwater. By accomplishing these repairs in-place, propeller removal and replacement can be avoided thereby saving maintenance funds and returning ships to service faster. Required I/O is 8.</p> <p>[P40A / HY147 - ROV TELEMETRY SYSTEM]: The ROV Telemetry System is the communication link between the surface controller and the vehicle. Required I/O is 6 (3 operational plus 3 spares).</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering		P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204561N, 0204454N, 0204423N
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / HY153 - TENSIO METERS]: Tensiometers are used to measure the tension exerted on a beach gear ground leg or heavy lift system. One system consists of two load sensing units with associated rigging and read-out meters. Required I/O is 66.</p> <p>[P40A / HY154 - WATER PURIFIERS]: Water Purifiers are capable of converting salty, brackish, or biologically polluted water into potable water. The systems are fully maritized for use aboard a ship of opportunity, and are complete with all necessary power sources, hoses, chemicals, and associated support equipment. Required I/O is 18.</p> <p>[P40A / HY155 - POWER GENERATORS]: The power generator systems are used aboard ship or ashore to provide electrical power during salvage and recovery operations. The power generator systems are composed of small diesel powered generator units (5kw, 7.5 kw, and 12 kw) and large diesel powered generator units (20 kw and 30 kw) and include power distribution panels, electrical distribution cabling, and all ancillary equipment. Required I/O is 47.</p> <p>[P40A / HY156 - SALVAGE VANS]: Salvage Vans are modified ISO 8ft x 8ft x 20ft shipping containers that are equipped with industrial shop equipment, hand tools, powered hand tools, lifting and hoisting devices, and other misc required material to fulfill the various missions of salvage and recovery. Each van is outfitted with humidity control devices for prolonging equipment life during storage. Required I/O is 10.</p> <p>[P40A / HY158 - ROV PROPULSION SYSTEMS]: ROV propulsion systems provide main propulsion and control of remotely operated vehicles. These consist of electric and hydraulic thruster motors, thrusters, controllers, and interconnect cabling and power supplies. Required I/O is 12 (8 operational plus 4 spares).</p> <p>[P40A / HY164 - FLYAWAY FADOSS SYSTEM]: This system consists of lightweight motion compensators, winches, rigging jewelry, and lines for lifting heavy objects off the sea floor. All of the components are designed to be flown to the salvage site and loaded aboard ships of opportunity. Required I/O is 4.</p> <p>[P40A / HY169 - UWSH POWER TOOLS]: These tools will replace the hydraulic tool previously issued to Fleet divers with improved technology. This technology improvement will provide tools which are more environmentally compatible, offer greater power, lighter weight and reduced maintenance. I/O is 15.</p> <p>[P40A / HY184 - SALVAGE SUPPORT SYSTEMS]: Salvage support systems are used to support Fleet Salvage Operations and include complex systems and equipment required for Command & Control, communications, supply, repair, rigging, and personnel support. Each system includes the storage and shipping containers necessary to forward deploy the systems and equipment to a salvage site. Humidity control devices are used for prolonging equipment life during storage. Required I/O is 10.</p> <p>[P40A / HY186 - SMART TOW SYSTEMS]: These systems consists of load cells, accelerometers, fire and flooding alarms, telemetry links and ancillary equipment to provide ship handlers with information critical to safe conduct of open ocean tows. I/O is 6.</p> <p>[P40A / HY190 - VIDEO/CAMERA EQUIPMENT]: Underwater video/camera equipment used by divers to perform detailed inspections of ship hulls and appendages. Equipment is used extensively throughout the Fleet. This equipment will replace aging systems currently in use throughout the Fleet. I/O is 20.</p> <p>[P40A / HY195 - UNDERWATER RIGGING SUPPORT SYSTEM]: General and special purpose rigging equipment designed for use in underwater ship repair applications. I/O - 10.</p> <p>[P40A / HY196 - UWSH SUBMARINE SUPPORT SYSTEM]: Special purpose underwater tools and equipment used by divers to perform routine and emergent repairs on all classes of submarines. I/O - 16.</p> <p>[P40A / HY197 - UWSH PIERSIDE SUPPORT VANS]: Portable milvans and shippable containers outfitted with general and special purpose tools to support various underwater ship husbandry operations. I/O - 10</p> <p>[P40A / HY198 - UWSH SURFACE SHIP SUPPORT SYSTEMS]: Special purpose underwater tools used by divers to perform routine and emergent repairs to all Classes of surface ships. I/O - 32</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering		P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204561N, 0204454N, 0204423N
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / HY200 - DEEP DRONE 21]: Modernization of the Remotely Operated Vehicle (ROV) DEEP DRONE to include power, telemetry, avionics, thrusters, camera systems, and tools. Required Inventory Objective I/O is 1.</p> <p>[P40A / HY201 - JETTING PUMPS]: System is designed to provide a high velocity water stream to move mud, sand, or silt. The system consists of a medium pressure, high flow rate pump that supplies water to specially designed diver operated jetting nozzles via high pressure hoses. The system is used mainly for jetting, but also can be used for firefighting and limited dewatering. Required Inventory Objective I/O is 22.</p> <p>[P40A / HY202 - 300/400 AMP PORTABLE ELECTRIC WELDER]: System consists of a portable electric powered welder, welding cables, a stinger and ground clamp, welding safety equipment, and a spare parts kit. The system is used for arc welding and oxygen-arc cutting. Required Inventory Objective I/O is 22.</p> <p>[P40A / HY203 - HYDRAULIC U/W TOOL KIT]: Tool kit consists of various hydraulic actuated tools operated by a diver to perform various tasks underwater. The kit also contains hydraulic hoses, various fittings, and accessories. Required Inventory Objective I/O is 25.</p> <p>[P40A / HY204 - 400 AMP WELDER - DIESEL]: System consists of a skid-mounted, portable, diesel powered welding generator, welding cables, a stinger and ground clamp, welding safety equipment, and a spare parts kit. The system is used for arc welding and oxygen-arc cutting. Required Inventory Objective I/O is 25.</p> <p>[P40A / HY205 - LIGHTING KIT SYSTEM]: System consists of extendable masts, 500-watt halogen floodlights, drop lights, extension cords, spare bulbs, and other miscellaneous items to support general lighting for salvage and oil pollution operations. The Lighting Kit System can use any 100-volt, single phase power source found at the salvage or pollution site. Required Inventory Objective I/O is 25.</p> <p>[P40A / HY206 - KERRIE CABLE UNDERWATER CUTTING SYSTEM]: Underwater cutting systems are used by salvage response personnel to cut through metal and other material either underwater or in air using an exothermic material. The underwater cutting systems include the exothermic material including Brocco Rod or Kerri Cable, pressurize oxygen gas hoses and regulators, cutting support fixtures, and all ancillary equipment. Required I/O is 28.</p> <p>[P40A / HY215 LIGHTWEIGHT MOORING SYSTEM]: This is a lightweight and highly portable system for establishing a mooring in shallow to deep water. The system shall include a mooring leg consisting of anchors, chain, synthetic line and associated jewelry and fittings. Total I/O is 8.</p> <p>[P40A / HY216 - SALVAGE/BDR MATERIAL KIT]: This system is for emergency response to ship casualties and provides the necessary material to construct custom patches and cofferdams. The kit also includes tools to install the custom built items in place over the damaged hull sections. I/O is 25.</p> <p>[P40A / HY217 - SALVAGE LIFT BAGS (22K lbs)]: This system provides a buoyant force using compressed air to lift or support items in the water column. These Lift Bags are sized to provide a force of approximately 22,000 lbs. The I/O is 22.</p> <p>[P40A / HY218 SALVAGE LIFT BAGS (35 TONS)]: This system provides a buoyant force using compressed air to lift or support items in the water column. These Lift Bags are sized to provide a force of approximately 35 tons. The I/O is 16.</p> <p>[P40A / HY219 - PORTABLE SALVAGE CRANE]: A portable crane system for use on a vessel of opportunity to provide a lifting force during salvage operations. I/O is 4.</p> <p>[P40A / HY220 - AUV SEARCH SYSTEM]: The AUV Search System will survey the ocean floor using a suite of sensors to locate and identify targets of interest. The sensors include Side Scan Sonar, multibeam, sub bottom profile, and still photo. The complete system includes a vehicle, sensor suite, A-frame handling system, and operations/shipping container. I/O is 1.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering		P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204561N, 0204454N, 0204423N
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / HY221 - ADVANCED POWER GENERATOR]: This system generates electrical power using solar and wind energy and stores it in super efficient Lithium Ion Batteries. The system is capable of supplying electrical power to operate a Command Van, Salvage Shop Van and a Salvage BDR Rigging Van for up to 5 days with no traditional petroleum fueled electrical power generator support. I/O is 8.</p> <p>[P40A / HY223 - 3D SONAR]: This system generates a 3D Image of the area or object being survey and is viewable in real time. The record of data is viewable off line for mission planning, allows for the measurement of distances and dimensions, and can be used during mission execution for operational control and situational awareness in zero visibility situations.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 11: Ocean Engineering	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment
---	---

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204561N, 0204454N, 0204423N
--	---	---

Line Item MDAP/MAIS Code: N/A **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Diving and Salvage Equipment	P-5a		- / 61.011	- / 10.572	- / 15.982	- / 8.973	- / -	- / 8.973
P-40	Total Gross/Weapon System Cost			- / 61.011	- / 10.572	- / 15.982	- / 8.973	- / -	- / 8.973

*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.

--

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11 **P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment **Aggregated Items Title:** Diving and Salvage Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) DIVING (N97)																				
1.1) HY106 - LIGHTWEIGHT DIVE SYSTEMS	A		1,424K	2	2.848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.2) HY107 - PORTABLE RECOMPRESSION CHAMBERS	A		540,000.00	1	0.540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.3) HY123 - FLY AWAY DIVE SYSTEMS III HP COMPOSITE FLASK REPLACEMENT	A		292,666.67	24	7.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.4) HY132 - STANDARD NAVY DOUBLE LOCK RECOMPRESSION CHAMBER (SNDL) ^(†)	A		2,055K	3	6.166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.5) HY176 - HP AIR COMPRESSORS ^(†)	A		30,416.67	12	0.365	69,500.00	2	0.139	71,000.00	1	0.071	-	-	-	-	-	-	-	-	
1.6) HY177 - AIR PURIFICATION UNITS ^(†)	A		212,600.00	5	1.063	42,600.00	5	0.213	43,416.67	12	0.521	44,300.00	10	0.443	-	-	-	44,300.00	10	0.443
1.7) HY179 - NAVY EXPERIMENTAL DIVING UNIT ^(†)	A		1,031K	5	5.156	1,227K	1	1.227	583,000.00	1	0.583	595,000.00	1	0.595	-	-	-	595,000.00	1	0.595
1.8) HY192 - THERMAL DIVING SUITS ^{(1)(†)}	A		6,833.33	12	0.082	39,000.00	8	0.312	40,000.00	8	0.320	-	-	-	-	-	-	-	-	-
1.9) HY193 - SURFACE SUPPLIED DIVING HELMET ^{(2)(†)}	A		19,343.75	32	0.619	6,800.00	5	0.034	6,800.00	5	0.034	-	-	-	-	-	-	-	-	-
1.10) HY194 - CONTAMINATED WATER DIVING EQUIPMENT ^{(3)(†)}	A		412,500.00	2	0.825	-	-	-	194,000.00	1	0.194	411,000.00	1	0.411	-	-	-	411,000.00	1	0.411
1.11) HY199 - NAVY DIVE COMPUTER ^(†)	A		1,685.61	528	0.890	1,371.43	35	0.048	1,528.57	70	0.107	1,557.14	70	0.109	-	-	-	1,557.14	70	0.109
1.12) HY207 - EXTREME LIGHTWEIGHT DIVING SYSTEM (XLDS) ^{(4)(†)}	A		41,333.33	3	0.124	42,500.00	2	0.085	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11 **P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment **Aggregated Items Title:** Diving and Salvage Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
1.13) HY208 - FLEX CHAMBER TEST ARTICLES ^(†)	A		400,000.00	1	0.400	425,000.00	1	0.425	-	-	-	-	-	-	-	-	-	-	-	
1.14) HY210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY ^{(5)(†)}	A		182,666.67	3	0.548	35,000.00	11	0.385	20,000.00	11	0.220	20,333.33	6	0.122	-	-	-	20,333.33	6	0.122
1.15) HY211 - COMPACT OXYGEN SUPPLY RACK ASSEMBLY (COSRA) ^(†)	A		182,666.67	3	0.548	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.16) HY212 - PORTABLE DIVE SYSTEM CONTROL CONSOLE ASSEMBLY (CCA) ^{(6)(†)}	A		182,000.00	3	0.546	119,500.00	2	0.239	110,000.00	4	0.440	-	-	-	-	-	-	-	-	
1.17) HY213 - HP COMPOSITE FLASK REPLACEMENT ^(†)	A		4,579.44	321	1.470	4,746.48	71	0.337	4,840.91	88	0.426	4,943.66	71	0.351	-	-	-	4,943.66	71	0.351
1.18) HY222 - 300 FSW NAVY DEEP DOUBLE LOCK RECOMPRESSION CHAMBER ^(†)	A		-	-	-	-	-	-	3,300K	1	3.300	-	-	-	-	-	-	-	-	
1.19) HY224 - SCUBA REGULATORS ^(†)	A		-	-	-	-	-	-	1,022.99	87	0.089	1,050.00	20	0.021	-	-	-	1,050.00	20	0.021
1.20) HY225 - PRESSURE TEST CHAMBERS ^(†)	A		-	-	-	-	-	-	12,228.57	35	0.428	12,500.00	10	0.125	-	-	-	12,500.00	10	0.125
1.21) HY226 FLEX CHAMBER ^(†)	A		-	-	-	-	-	-	-	-	-	331,666.67	3	0.995	-	-	-	331,666.67	3	0.995
Subtotal: 1) DIVING (N97)			-	-	29.214	-	-	3.444	-	-	6.733	-	-	3.172	-	-	-	-	-	3.172
2) DIVING AND/OR SALVAGE (N95)																				
2.1) HY132 - STANDARD NAVY DOUBLE LOCK RECOMPRESSION CHAMBER (SNDL)	A		1,450K	3	4.351	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 2) DIVING AND/OR SALVAGE (N95)			-	-	4.351	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3) SALVAGE (N9I)																				

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11 **P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment **Aggregated Items Title:** Diving and Salvage Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
3.1) HY016 - DECK SYSTEMS ^{(7)(f)}	A		39,400.00	10	0.394	59,000.00	1	0.059	60,000.00	2	0.120	61,500.00	2	0.123	-	-	-	61,500.00	2	0.123
3.2) HY043 - OCEANOGRAPHIC UMBILICAL ^(f)	A		821,000.00	1	0.821	982,000.00	1	0.982	-	-	-	-	-	-	-	-	-	-	-	-
3.3) HY050 - SYNTHETIC LINES ^(f)	A		-	-	-	203,500.00	2	0.407	-	-	-	-	-	-	-	-	-	-	-	-
3.4) HY062 - ROV SONAR SYSTEMS ^(f)	A		186,000.00	1	0.186	-	-	-	-	-	-	1,761K	1	1.761	-	-	-	1,761K	1	1.761
3.5) HY116 - PORTABLE SUBMERSIBLE PUMPS ^{(8)(f)}	A		166,615.38	13	2.166	89,000.00	4	0.356	-	-	-	-	-	-	-	-	-	-	-	
3.6) HY136 - 30 KIP FADOSS	A		362,000.00	1	0.362	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.8) HY140 - ROV CONTROL PACKAGE ^(f)	A		991,000.00	1	0.991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.9) HY142 - SALVAGE AIR COMPRESSOR	A		35,500.00	4	0.142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.10) HY145 - COFFERDAM SYSTEM ^{(9)(f)}	A		631,333.33	3	1.894	139,666.67	3	0.419	111,666.67	3	0.335	123,666.67	3	0.371	-	-	-	123,666.67	3	0.371
3.11) HY146 - PROPELLER REPAIR KIT ^{(10)(f)}	A		421,000.00	2	0.842	209,500.00	2	0.419	-	-	-	269,000.00	1	0.269	-	-	-	269,000.00	1	0.269
3.12) HY147 - ROV TELEMETRY SYSTEM	A		398,000.00	1	0.398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.13) HY153 - TENSIMETERS ^(f)	A		15,869.57	23	0.365	15,400.00	5	0.077	-	-	-	-	-	-	-	-	-	-	-	-
3.14) HY154 - WATER PURIFIERS	A		140,000.00	1	0.140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.15) HY155 - POWER GENERATORS ^(f)	A		10,500.00	18	0.189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.16) HY156 - SALVAGE VANS ^{(11)(f)}	A		138,250.00	4	0.553	196,000.00	1	0.196	199,000.00	2	0.398	207,000.00	1	0.207	-	-	-	207,000.00	1	0.207
3.17) HY158 - ROV PROPULSION SYSTEMS	A		596,000.00	1	0.596	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11 **P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment **Aggregated Items Title:** Diving and Salvage Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
3.18) HY164 - FLYAWAY FADOSS SYSTEM ^(†)	A		642,500.00	2	1.285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3.19) HY169 - UWSH POWER TOOLS ^{(12)(†)}	A		145,000.00	1	0.145	-	-	-	133,000.00	3	0.399	120,000.00	2	0.240	-	-	-	120,000.00	2	0.240
3.20) HY184 - SALVAGE SUPPORT SYSTEMS ^{(13)(†)}	A		371,666.67	6	2.230	215,000.00	2	0.430	-	-	-	-	-	-	-	-	-	-	-	
3.21) HY186 - SMART TOW SYSTEMS ^{(14)(†)}	A		36,000.00	1	0.036	160,000.00	1	0.160	-	-	-	165,000.00	1	0.165	-	-	-	165,000.00	1	0.165
3.22) HY190 - VIDEO/CAMERA EQUIPMENT ^{(15)(†)}	A		257,000.00	1	0.257	180,000.00	1	0.180	72,400.00	5	0.362	-	-	-	-	-	-	-	-	
3.23) HY195 - UNDERWATER RIGGING SUPPORT SYSTEM ^{(16)(†)}	A		337,250.00	4	1.349	139,000.00	3	0.417	201,500.00	2	0.403	201,500.00	2	0.403	-	-	-	201,500.00	2	0.403
3.24) HY196 - UWSH SUBMARINE SUPPORT SYSTEM ^{(17)(†)}	A		537,571.43	7	3.763	1,095K	2	2.190	266,666.67	3	0.800	563,500.00	2	1.127	-	-	-	563,500.00	2	1.127
3.25) HY197 - UWSH PIERSIDE SUPPORT VANS ^{(18)(†)}	A		388,500.00	2	0.777	-	-	-	240,000.00	2	0.480	-	-	-	-	-	-	-	-	
3.26) HY198 - UWSH SURFACE SHIP SUPPORT SYSTEMS ^{(19)(†)}	A		166,625.00	16	2.666	-	-	-	160,000.00	3	0.480	121,500.00	2	0.243	-	-	-	121,500.00	2	0.243
3.27) HY200 - DEEP DRONE 21	A		3,072K	1	3.072	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3.28) HY201 - JETTING PUMPS ^(†)	A		175,000.00	3	0.525	207,000.00	3	0.621	210,500.00	2	0.421	214,000.00	3	0.642	-	-	-	214,000.00	3	0.642
3.29) HY202 - 300/400 AMP PORTABLE ELECTRIC WELDER	A		7,000.00	8	0.056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3.30) HY203 - HYDRAULIC U/W TOOL KIT ^(†)	A		55,357.14	14	0.775	65,000.00	3	0.195	-	-	-	67,000.00	1	0.067	-	-	-	67,000.00	1	0.067
3.31) HY204 - 400 AMP WELDER - DIESEL ^(†)	A		32,375.00	8	0.259	20,000.00	1	0.020	20,333.33	3	0.061	-	-	-	-	-	-	-	-	

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11 **P-1 Line Item Number / Title:** 1130 / Diving and Salvage Equipment **Aggregated Items Title:** Diving and Salvage Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
3.32) HY205 - LIGHTING KIT SYSTEM ^(†)	A		13,583.33	12	0.163	-	-	-	17,625.00	8	0.141	-	-	-	-	-	-	-	-	-
3.35) HY216 - SALVAGE/BDR MATERIAL KIT ^(†)	A		49,000.00	1	0.049	-	-	-	-	-	-	51,000.00	3	0.153	-	-	-	51,000.00	3	0.153
3.37) HY218 SALVAGE LIFT BAGS (35 TONS) ^(†)	A		-	-	-	-	-	-	-	-	-	15,000.00	2	0.030	-	-	-	15,000.00	2	0.030
3.39) HY220 - AUV SEARCH SYSTEM ^(†)	A		-	-	-	-	-	-	4,849K	1	4.849	-	-	-	-	-	-	-	-	-
Subtotal: 3) SALVAGE (N9I)			-	-	27.446	-	-	7.128	-	-	9.249	-	-	5.801	-	-	-	-	-	5.801
Total			-	-	61.011	-	-	10.572	-	-	15.982	-	-	8.973	-	-	-	-	-	8.973

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

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment	Aggregated Items Title: Diving and Salvage Equipment

Footnotes:

- (1) HY192 - THERMAL DIVING SUITS: Suits that have an active heating system, to keep diver warm, have higher unit costs than standard dry suits. The units bought previous to FY15 are standard Dry Suits. Starting in FY15, will begin to procure active heating systems. These include a tube suit, u/w heat pump, battery pack, and charging system. Unit cost estimate is based on contractor estimates.
- (2) HY193 - SURFACE SUPPLIED DIVING HELMET: Systems will range in unit cost based on which system is procured (with or without heads-up display/visual amplification).
- (3) HY194 - CONTAMINATED WATER DIVING EQUIPMENT: We are funding part of our inventory objective in each of the three years (FY14, FY16, FY17). At the end of FY17 our inventory objective (3 systems) will be complete and we will have certified the equipment for use.
- (4) HY207 - EXTREME LIGHTWEIGHT DIVING SYSTEM: The unit cost increases from \$42.5K in FY15 to \$70.5 in FY20 due to the addition of a second surface supplied console.
- (5) HY210 - COMPACT DIVER LIFE SUPPORT SYSTEMS, AIR SUPPLY: Unit cost decreases from \$188K in FY14 to \$35K in FY15 due to the fact that the systems being built are different. They meet the same purpose (i.e. 5000 PSI High Pressure Air Supply for use in Diving) but are of a different design.
- (6) HY212 - PORTABLE DIVE SYSTEM CONTROL CONSOLE ASSEMBLY (CCA): Unit cost decreases from \$317K in FY14 to \$120K in FY 15 due to the fact that the consoles being built are different. The system built in FY14 provided both oxygen and air down to a diver. The systems being built in FY15 and forward only provide air.
- (7) HY016 - DECK CAPSTANS: Unit cost variation is dependent on the specific components required IAW the procurement schedule.
- (8) HY116 - PORTABLE SUBMERSIBLE PUMPS: Unit cost variation is dependent on the specific components required IAW the procurement schedule.
- (9) HY145 - COFFERDAM SYSTEM: These habitats support all ship classes and vary widely in size, complexity and therefore have a large cost variance.
- (10) HY146 - PROPELLER REPAIR KIT: Propellers across various ship classes have a wide variance of component costs therefore, unit cost variation for repair kits is dependent on the specific components required IAW the procurement schedule.
- (11) HY156 - SALVAGE VANS: Unit cost variation is dependent on the specific components required IAW the procurement schedule.
- (12) HY169 - UWSH POWER TOOLS: These systems cost range variance is due the number and complexity of the tools and equipment components required IAW the procurement schedule.
- (13) HY184 - SALVAGE SUPPORT SYSTEMS - Unit cost variation is dependent on the specific components required IAW the procurement schedule.
- (14) HY186 - SMART TOW SYSTEMS: Current version incorporates almost 7 years of Fleet Feedback on the performance of the SMART Tow system. Significant technical enhancements have been implemented in order to improve reliability and performance of the system in most arduous sea conditions. Fleet requirements to tow larger combatants under no-manning conditions have resulted in a substantially larger system with additional sensors and higher order programming to ensure the tows are completed safely over greater distances. Unit costs reflect current market analysis of the advance technology components employed in the system.
- (15) HY190 - VIDEO/CAMERA EQUIPMENT: These cost variance is due the number and complexity of the components required IAW the procurement schedule; decreasing through FY20 due to maturing technology.
- (16) HY195 - UNDERWATER RIGGING SUPPORT SYSTEM: These systems have a large cost range variance due the number and complexity of the tools and equipment components required which is driven by the differing complexity, size, configuration and depth of the submarine systems on which they are employed over the 5 classes of submarines supported.
- (17) HY196 - UWSH SUBMARINE SUPPORT SYSTEM: These systems have a large cost range variance due the number and complexity of the tools and equipment components required which is driven by the differing complexity, size, configuration and depth of the submarine systems on which they are employed over the 5 classes of submarines supported.
- (18) HY197 - UWSH PIERSIDE SUPPORT VANS: Unit cost variation is dependent on the specific components required IAW the procurement schedule.
- (19) HY198 UWSH SURFACE SHIP SUPPORT SYSTEMS: Unit cost is subject to the ship class and component complexity supported causing a wide variance in unit cost.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11			P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment					Aggregated Items: Diving and Salvage Equipment				
Item Number / Title [DODIC]	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) DIVING (N97)												
1.4) HY132 - STANDARD NAVY DOUBLE LOCK REPRESSION CHAMBER (SNDL)		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	1	1,259K	Y		
1.5) HY176 - HP AIR COMPRESSORS		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	1	68,000.00	Y		
1.5) HY176 - HP AIR COMPRESSORS		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	2	69,500.00	Y		
1.5) HY176 - HP AIR COMPRESSORS		2016	Unknown / TBD	C / TBD	** NO PCO **	Apr 2016	Apr 2017	1	71,000.00	Y		
1.6) HY177 - AIR PURIFICATION UNITS		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	4	129,250.00	Y		
1.6) HY177 - AIR PURIFICATION UNITS		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	5	42,600.00	Y		
1.6) HY177 - AIR PURIFICATION UNITS		2016	Unknown / TBD	TBD	** NO PCO **	Apr 2016	Apr 2017	12	43,416.67	Y		
1.6) HY177 - AIR PURIFICATION UNITS		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	10	44,300.00	Y		
1.7) HY179 - NAVY EXPERIMENTAL DIVING UNIT		2013	Navy Experimental Diving Unit / Panama City, FL	Various	Panama City, FL	Apr 2013	Apr 2014	1	768,000.00	Y		
1.7) HY179 - NAVY EXPERIMENTAL DIVING UNIT		2014	GLOBAL PCCI / IRVINE, CA	C / CPAF	WASHINGTON, DC	Jul 2014	Jul 2015	1	583,000.00	Y		
1.7) HY179 - NAVY EXPERIMENTAL DIVING UNIT		2015	NSWC/CD / PHILADELPHIA, PA	Various	Panama City, FL	Apr 2015	Apr 2016	1	1,227K	Y		
1.7) HY179 - NAVY EXPERIMENTAL DIVING UNIT		2016	Unknown / TBD	Various	** NO PCO **	Apr 2016	Apr 2017	1	583,000.00	Y		
1.7) HY179 - NAVY EXPERIMENTAL DIVING UNIT		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	1	595,000.00	N		
1.8) HY192 - THERMAL DIVING SUITS ⁽¹⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	2	2,500.00	Y		
1.8) HY192 - THERMAL DIVING SUITS ⁽¹⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2015	Apr 2016	8	39,000.00	Y		
1.8) HY192 - THERMAL DIVING SUITS ⁽¹⁾		2016	Unknown / TBD	C / CPAF	** NO PCO **	Apr 2016	Apr 2017	8	40,000.00	Y		
1.9) HY193 - SURFACE SUPPLIED DIVING HELMET ⁽²⁾		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	15	6,666.67	Y		
1.9) HY193 - SURFACE SUPPLIED DIVING HELMET ⁽²⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	5	6,600.00	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment	Aggregated Items: Diving and Salvage Equipment
--	---	--

Item Number / Title [DODIC]	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
1.9) HY193 - SURFACE SUPPLIED DIVING HELMET ⁽²⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2015	Apr 2016	5	6,800.00	Y		
1.9) HY193 - SURFACE SUPPLIED DIVING HELMET ⁽²⁾		2016	Unknown / TBD	TBD	** NO PCO **	Apr 2016	Apr 2017	5	6,800.00	Y		
1.10) HY194 - CONTAMINATED WATER DIVING EQUIPMENT ⁽³⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	1	379,000.00	Y		
1.10) HY194 - CONTAMINATED WATER DIVING EQUIPMENT ⁽³⁾		2016	Unknown / Unknown	TBD	** NO PCO **	Apr 2016	Apr 2017	1	194,000.00	Y		
1.10) HY194 - CONTAMINATED WATER DIVING EQUIPMENT ⁽³⁾		2017	Unknown / Unknown	C / TBD	** NO PCO **	Apr 2017	Apr 2018	1	411,000.00	Y		
1.11) HY199 - NAVY DIVE COMPUTER		2013	NEDU / Panama City, FL	Various	WASHINGTON, DC	Mar 2013	Mar 2014	126	1,071.43	Y		
1.11) HY199 - NAVY DIVE COMPUTER		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	56	1,089.29	Y		
1.11) HY199 - NAVY DIVE COMPUTER		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	35	1,371.43	Y		
1.11) HY199 - NAVY DIVE COMPUTER		2016	Unknown / TBD	TBD	** NO PCO **	Apr 2016	Apr 2017	70	1,528.57	Y		
1.11) HY199 - NAVY DIVE COMPUTER		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	70	1,557.14	Y		
1.12) HY207 - EXTREME LIGHTWEIGHT DIVING SYSTEM (XLDS) ⁽⁴⁾		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	1	41,000.00	Y		
1.12) HY207 - EXTREME LIGHTWEIGHT DIVING SYSTEM (XLDS) ⁽⁴⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	2	41,500.00	Y		
1.12) HY207 - EXTREME LIGHTWEIGHT DIVING SYSTEM (XLDS) ⁽⁴⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2015	Apr 2016	2	42,500.00	Y		
1.13) HY208 - FLEX CHAMBER TEST ARTICLES		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	1	400,000.00	Y		
1.13) HY208 - FLEX CHAMBER TEST ARTICLES		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Jul 2015	Jul 2016	1	425,000.00	Y		
1.14) HY210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY ⁽⁵⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	1	188,000.00	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11			P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment					Aggregated Items: Diving and Salvage Equipment				
Item Number / Title [DODIC]	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
1.14) HY210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY ⁽⁵⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	11	35,000.00	Y		
1.14) HY210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY ⁽⁵⁾		2016	Unknown / TBD	TBD	** NO PCO **	Apr 2016	Apr 2017	11	20,000.00	Y		
1.14) HY210 - COMPACT DIVER LIFE SUPPORT SYSTEM AIR SUPPLY ⁽⁵⁾		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	6	20,333.33	Y		
1.15) HY211 - COMPACT OXYGEN SUPPLY RACK ASSEMBLY (COSRA)		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	1	188,000.00	Y		
1.16) HY212 - - PORTABLE DIVE SYSTEM CONTROL CONSOLE ASSEMBLY (CCA) ⁽⁶⁾		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	2	114,500.00	Y		
1.16) HY212 - - PORTABLE DIVE SYSTEM CONTROL CONSOLE ASSEMBLY (CCA) ⁽⁶⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	1	317,000.00	Y		
1.16) HY212 - - PORTABLE DIVE SYSTEM CONTROL CONSOLE ASSEMBLY (CCA) ⁽⁶⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	2	119,500.00	Y		
1.16) HY212 - - PORTABLE DIVE SYSTEM CONTROL CONSOLE ASSEMBLY (CCA) ⁽⁶⁾		2016	Unknown / TBD	TBD	** NO PCO **	Apr 2016	Apr 2017	4	110,000.00	Y		
1.17) HY213 - HP COMPOSITE FLASK REPLACEMENT		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2013	Apr 2014	124	4,564.52	Y		
1.17) HY213 - HP COMPOSITE FLASK REPLACEMENT		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	125	4,656.00	Y		
1.17) HY213 - HP COMPOSITE FLASK REPLACEMENT		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2015	Apr 2016	71	4,746.48	Y		
1.17) HY213 - HP COMPOSITE FLASK REPLACEMENT		2016	Unknown / TBD	C / CPAF	** NO PCO **	Apr 2016	Apr 2017	88	4,840.91	Y		
1.17) HY213 - HP COMPOSITE FLASK REPLACEMENT		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	71	4,943.66	Y		
1.18) HY222 - 300 FSW NAVY DEEP DOUBLE LOCK RECOMPRESSION CHAMBER		2016	TBD / TBD	TBD	** NO PCO **	Apr 2016	Apr 2017	1	3,300K	Y		
1.19) HY224 - SCUBA REGULATORS		2016	Unknown / Unknown	C / TBD	** NO PCO **	Apr 2016	Apr 2017	87	1,022.99	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11			P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment					Aggregated Items: Diving and Salvage Equipment				
Item Number / Title [DODIC]	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
1.19) HY224 - SCUBA REGULATORS		2017	Unknown / Unknown	C / TBD	** NO PCO **	Apr 2017	Apr 2018	20	1,050.00	Y		
1.20) HY225 - PRESSURE TEST CHAMBERS		2016	Unknown / Unknown	C / TBD	** NO PCO **	Apr 2016	Apr 2017	35	12,228.57	Y		
1.20) HY225 - PRESSURE TEST CHAMBERS		2017	Unknown / Unknown	C / TBD	** NO PCO **	Apr 2017	Apr 2018	10	12,500.00	Y		
1.21) HY226 FLEX CHAMBER		2017	Unknown / Unknown	C / TBD	** NO PCO **	Apr 2017	Apr 2018	3	331,666.67	Y		
3) SALVAGE (N9I)												
3.1) HY016 - DECK SYSTEMS ⁽⁷⁾		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	2	57,500.00	Y		
3.1) HY016 - DECK SYSTEMS ⁽⁷⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	2	55,500.00	Y		
3.1) HY016 - DECK SYSTEMS ⁽⁷⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Jan 2015	Jan 2016	1	59,000.00	Y		
3.1) HY016 - DECK SYSTEMS ⁽⁷⁾		2016	Unknown / TBD	C / TBD	** NO PCO **	Apr 2016	Apr 2017	2	60,000.00	Y		
3.1) HY016 - DECK SYSTEMS ⁽⁷⁾		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	2	61,500.00	Y		
3.2) HY043 - OCEANOGRAPHIC UMBILICAL		2015	PHOENIX INTL / LARGO MD	C / CPAF	WASHINGTON, DC	May 2015	May 2016	1	982,000.00	Y		
3.3) HY050 - SYNTHETIC LINES		2015	GPC / VA	C / CPAF	WASHINGTON, DC	Apr 2015	Apr 2016	2	203,500.00	Y		
3.4) HY062 - ROV SONAR SYSTEMS		2017	TBD / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	1	1,761K	Y		
3.5) HY116 - PORTABLE SUBMERSIBLE PUMPS ⁽⁸⁾		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Jun 2013	Jun 2014	2	134,000.00	Y		
3.5) HY116 - PORTABLE SUBMERSIBLE PUMPS ⁽⁸⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2014	May 2015	3	87,333.33	Y		
3.5) HY116 - PORTABLE SUBMERSIBLE PUMPS ⁽⁸⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2015	Apr 2016	4	89,000.00	Y		
3.8) HY140 - ROV CONTROL PACKAGE		2013	PHOENIX INTL / LARGO MD	C / CPAF	WASHINGTON, DC	Oct 2013	Sep 2014	1	991,000.00	Y		
3.10) HY145 - COFFERDAM SYSTEM ⁽⁹⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	1	135,000.00	Y		
3.10) HY145 - COFFERDAM SYSTEM ⁽⁹⁾		2015	PHOENIX INTL / LARGO MD	C / CPAF	WASHINGTON, DC	Apr 2015	Apr 2016	3	139,666.67	Y		
3.10) HY145 - COFFERDAM SYSTEM ⁽⁹⁾		2016	Unknown / Unknown	TBD	** NO PCO **	Apr 2016	Apr 2017	3	111,666.67	Y		
3.10) HY145 - COFFERDAM SYSTEM ⁽⁹⁾		2017	Unknown / Unknown	TBD	** NO PCO **	Apr 2017	Apr 2018	3	123,666.67	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment	Aggregated Items: Diving and Salvage Equipment
--	---	--

Item Number / Title [DODIC]	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
3.11) HY146 - PROPELLER REPAIR KIT ⁽¹⁰⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	2	209,500.00	Y		
3.11) HY146 - PROPELLER REPAIR KIT ⁽¹⁰⁾		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	1	269,000.00	Y		
3.13) HY153 - TENSIO METERS		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	6	15,000.00	Y		
3.13) HY153 - TENSIO METERS		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	10	15,400.00	Y		
3.13) HY153 - TENSIO METERS		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Aug 2015	Aug 2016	5	15,400.00	Y		
3.15) HY155 - POWER GENERATORS		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	2	6,000.00	Y		
3.16) HY156 - SALVAGE VANS ⁽¹¹⁾		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Sep 2014	1	190,000.00	Y		
3.16) HY156 - SALVAGE VANS ⁽¹¹⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Aug 2015	Jul 2016	1	196,000.00	Y		
3.16) HY156 - SALVAGE VANS ⁽¹¹⁾		2016	Unknown / TBD	C / TBD	** NO PCO **	Apr 2016	Mar 2017	2	199,000.00	Y		
3.16) HY156 - SALVAGE VANS ⁽¹¹⁾		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Mar 2018	1	207,000.00	Y		
3.18) HY164 - FLYAWAY FADOSS SYSTEM		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Jun 2013	Jun 2014	1	751,000.00	Y		
3.19) HY169 - UWSH POWER TOOLS ⁽¹²⁾		2016	TBD / TBD	C / TBD	** NO PCO **	Apr 2016	Apr 2017	3	133,000.00	Y		
3.19) HY169 - UWSH POWER TOOLS ⁽¹²⁾		2017	TBD / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	2	120,000.00	Y		
3.20) HY184 - SALVAGE SUPPORT SYSTEMS ⁽¹³⁾		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	1	207,000.00	Y		
3.20) HY184 - SALVAGE SUPPORT SYSTEMS ⁽¹³⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	2	205,500.00	Y		
3.20) HY184 - SALVAGE SUPPORT SYSTEMS ⁽¹³⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2015	Apr 2016	2	215,000.00	Y		
3.21) HY186 - SMART TOW SYSTEMS ⁽¹⁴⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Aug 2015	Aug 2016	1	160,000.00	Y		
3.21) HY186 - SMART TOW SYSTEMS ⁽¹⁴⁾		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	1	165,000.00	Y		
3.22) HY190 - VIDEO/CAMERA EQUIPMENT ⁽¹⁵⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	1	180,000.00	Y		
3.22) HY190 - VIDEO/CAMERA EQUIPMENT ⁽¹⁵⁾		2016	TBD / TBD	C / TBD	** NO PCO **	Apr 2016	Apr 2017	5	72,400.00	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment	Aggregated Items: Diving and Salvage Equipment
--	---	--

Item Number / Title [DODIC]	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
3.23) HY195 - UNDERWATER RIGGING SUPPORT SYSTEM ⁽¹⁶⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	2	149,500.00	Y		
3.23) HY195 - UNDERWATER RIGGING SUPPORT SYSTEM ⁽¹⁶⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	3	139,000.00	Y		
3.23) HY195 - UNDERWATER RIGGING SUPPORT SYSTEM ⁽¹⁶⁾		2016	Unknown / TBD	C / CPAF	** NO PCO **	Apr 2016	Apr 2017	2	201,500.00	Y		
3.23) HY195 - UNDERWATER RIGGING SUPPORT SYSTEM ⁽¹⁶⁾		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	2	201,500.00	Y		
3.24) HY196 - UWSH SUBMARINE SUPPORT SYSTEM ⁽¹⁷⁾		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	2	306,500.00	Y		
3.24) HY196 - UWSH SUBMARINE SUPPORT SYSTEM ⁽¹⁷⁾		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	2	1,095K	Y		
3.24) HY196 - UWSH SUBMARINE SUPPORT SYSTEM ⁽¹⁷⁾		2016	Unknown / TBD	TBD	** NO PCO **	Apr 2016	Apr 2017	3	266,666.67	Y		
3.24) HY196 - UWSH SUBMARINE SUPPORT SYSTEM ⁽¹⁷⁾		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	2	563,500.00	Y		
3.25) HY197 - UWSH PIERSIDE SUPPORT VANS ⁽¹⁸⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	1	200,000.00	Y		
3.25) HY197 - UWSH PIERSIDE SUPPORT VANS ⁽¹⁸⁾		2016	Unknown / Unknown	TBD	** NO PCO **	Apr 2016	Apr 2017	2	240,000.00	Y		
3.26) HY198 - UWSH SURFACE SHIP SUPPORT SYSTEMS ⁽¹⁹⁾		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Dec 2012	Dec 2013	8	174,250.00	Y		
3.26) HY198 - UWSH SURFACE SHIP SUPPORT SYSTEMS ⁽¹⁹⁾		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	2	163,500.00	Y		
3.26) HY198 - UWSH SURFACE SHIP SUPPORT SYSTEMS ⁽¹⁹⁾		2016	Unknown / TBD	TBD	** NO PCO **	Apr 2016	Apr 2017	3	160,000.00	Y		
3.26) HY198 - UWSH SURFACE SHIP SUPPORT SYSTEMS ⁽¹⁹⁾		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	2	121,500.00	Y		
3.28) HY201 - JETTING PUMPS		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	1	200,000.00	Y		
3.28) HY201 - JETTING PUMPS		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Jan 2015	Jan 2016	3	207,000.00	Y		
3.28) HY201 - JETTING PUMPS		2016	Unknown / TBD	C / TBD	** NO PCO **	Apr 2016	Apr 2017	2	210,500.00	Y		
3.28) HY201 - JETTING PUMPS		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	3	214,000.00	Y		
3.30) HY203 - HYDRAULIC U/W TOOL KIT		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	5	62,400.00	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 11	P-1 Line Item Number / Title: 1130 / Diving and Salvage Equipment	Aggregated Items: Diving and Salvage Equipment
--	---	--

Item Number / Title [DODIC]	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
3.30) HY203 - HYDRAULIC U/W TOOL KIT		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	3	63,333.33	Y		
3.30) HY203 - HYDRAULIC U/W TOOL KIT		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2015	Apr 2016	3	65,000.00	Y		
3.30) HY203 - HYDRAULIC U/W TOOL KIT		2017	Unknown / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	1	67,000.00	Y		
3.31) HY204 - 400 AMP WELDER - DIESEL		2015	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	May 2015	May 2016	1	20,000.00	Y		
3.31) HY204 - 400 AMP WELDER - DIESEL		2016	Unknown / TBD	C / TBD	** NO PCO **	Apr 2016	Apr 2017	3	20,333.33	Y		
3.32) HY205 - LIGHTING KIT SYSTEM		2013	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Oct 2013	Oct 2014	2	16,000.00	Y		
3.32) HY205 - LIGHTING KIT SYSTEM		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	2	17,000.00	Y		
3.32) HY205 - LIGHTING KIT SYSTEM		2016	Unknown / TBD	C / TBD	** NO PCO **	Apr 2016	Apr 2017	8	17,625.00	Y		
3.35) HY216 - SALVAGE/BDR MATERIAL KIT		2014	GLOBAL PCCI / IRVINE CA	C / CPAF	WASHINGTON, DC	Apr 2014	Apr 2015	1	49,000.00	Y		
3.35) HY216 - SALVAGE/BDR MATERIAL KIT		2017	Unknown / Unknown	C / TBD	** NO PCO **	Apr 2017	Apr 2018	3	51,000.00	Y		
3.37) HY218 SALVAGE LIFT BAGS (35 TONS)		2017	TBD / TBD	C / TBD	** NO PCO **	Apr 2017	Apr 2018	2	15,000.00	Y		
3.39) HY220 - AUV SEARCH SYSTEM		2016	TBD / TBD	C / CPAF	** NO PCO **	Apr 2016	Apr 2017	1	4,849K	Y		

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats	P-1 Line Item Number / Title: 1210 / Standard Boats
--	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	326.515	180.365	29.982	43.684	-	43.684	42.775	44.566	45.408	46.190	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	326.515	180.365	29.982	43.684	-	43.684	42.775	44.566	45.408	46.190	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	326.515	180.365	29.982	43.684	-	43.684	42.775	44.566	45.408	46.190	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	0.440	-	-	-	-	-	-	-	-	-	0.440
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Naval Sea Systems Command (NAVSEA) -- Boats are procured to fill allowances established by CNO and NAVSEA and to replace boats now in service which are beyond economical repair at shore activities and aboard ships. Total inventory objectives change based on Fleet requirements.

H0001 BASE OPERATING FORCES

Force Protection Boat (Small) - Light gasoline twin outboard engine powered (up to 150 HP each) aluminum boats from 7 to 8.2 meters (24 to 27 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Can operate in areas where the environment (sea states/climatology) does not present a significant challenge. Service life is 7 years.

CNIC Force Protection Boat (Small) - Gasoline twin outboard engine aluminum boats approximately 8.5 meters (27 ft) in length with a narrow beam to aid in transport. Used primarily for fleet security, force protection/anti-terrorism, maritime interdiction and law enforcement operations at Naval activities and adjacent ports and waterways. The boats are provided with shouldering capabilities and foundations suitable for weapons. The boats operate primarily at Naval activities in sheltered harbors and waterways. Service life is 7 years.

CNIC Force Protection Boat (Medium) - Gasoline outboard engine powered aluminum boats approximately 10 meters (33 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations at Naval activities and adjacent ports and waterways duties. Needed for operations in areas where the environment (sea states/climatology) is significant enough to necessitate the larger boat and resultant larger engines to meet the performance/operational requirements. Service life is 7 years.

CNIC Force Protection Boat (Large) - Gasoline twin outboard engine powered aluminum boats approximately 11 meters (36 ft.) in length with a wide beam used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Needed in areas where the environment (sea states/climatology) necessitates a larger boat for dependability. Service life is 7 years.

CNIC Workboat (Medium) - Diesel inboard-engine powered steel boats up to approximately 11 meters (36 ft) in length used primarily for multi-purpose workboat applications at Naval activities and adjacent ports and waterways duties, such as towing and pusher boat capabilities, line handling, harbor cleaning, and security barrier tending. Habitability, maneuverability and bollard pull power are commensurate

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats		P-1 Line Item Number / Title: 1210 / Standard Boats
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>with operational requirements associated with barrier and moderately sized vessel assist (i.e., barges, boats, etc.). The Workboat (Medium) is capable of performing operations in areas where the operating environment (sea states/climatology) is not significant enough to necessitate the larger boat, but includes the capabilities necessary to meet operational requirements. Service life is 20 years.</p> <p>CNIC Workboat (Large) - Diesel inboard-engine powered steel boats over approximately 11 meters (36 ft) in length used primarily for multi-purpose workboat applications at Naval activities and adjacent ports and waterways. Duties include towing and pusher tugboat capabilities, diver support, ship's husbandry, cargo carrier, personnel ferry, harbor cleaning, firefighting and security barrier tending. Habitability, maneuverability and bollard pull power are commensurate with operational requirements associated with large sized vessel assist (i.e., ships, derricks, etc.). The Workboat (Large) is needed for operations in areas where the operating environment (including sea states/climatology) is significant enough to necessitate the larger boat and include the capabilities necessary to meet operational requirements. Service life is 25 years.</p> <p>CNIC Utility Boat Small - Gasoline outboard engine powered aluminum boats approximately 8 meters (26 feet) in length. Used for a variety of missions including search and rescue, craft maintenance, diver support, and transfer of personnel and light cargo. Service life is 10 years.</p> <p>H0002 AMPHIBIOUS ASSAULT SHIPS</p> <p>11M (36ft) Rigid Inflatable Boat (RIB) - Carried as a ship's boat or assigned to a shore activity to perform a variety of operations including personnel and light cargo transfer, anchorage administration Anti-Terrorism/Force Protection (AT/FP) operations and swimmer defense, visit/boarding/search and maritime interdiction, Amphibious Assault Vehicle (AAV) safety boat and Advanced Amphibious Assault Vehicle (AAAV) assist boat. Service life is 12 years.</p> <p>H0003 EXPLOSIVE ORDNANCE DISPOSAL FORCES</p> <p>Explosive Ordnance Disposal (EOD) Support Craft (RIB) - Used for area search, MK 5 and MK 16 Underwater Breathing Apparatus (UBA)/Diving Training, Mammal Operations, Ordnance/mine recovery, parachute insertion support and Command and Control. Service life is 10 years.</p> <p>11M (36ft) EOD RIB - The 11m RIBs are required to support the emergent establishment of an enduring MK 18 unmanned underwater vehicle family of systems capability for near term operational missions in the shallow water and very shallow water environments in the Fifth Fleet area of responsibility. Operational missions include Intelligence Preparation of the Operational Environment/Mine Countermeasure Missions. Service life is 7-10 years.</p> <p>H0004 NAVAL SPECIAL WARFARE</p> <p>NSW Short Range Support Craft - Used in support of combat swimmer-diver training evolutions and the Special Warfare Combatant Craft (SWCC) Basic Crewman Training curriculum. Service life is 10 years.</p> <p>NSW Long Range Support Craft - SEAL combat swimmer/SEAL Delivery Vehicle (SDV)/surface swimmer safety craft for offshore/open ocean training support. Provides transportation to/from training areas, dive supervisor/event officer-in-charge/corpsman safety support platform and injured diver/swimmer egress platform for Naval Special Warfare. Service life is 10 years.</p> <p>NSW RIB (formerly Enhanced Visit Board Search and Seizure) - Provide operational commander a capability to conduct VBSS and Maritime Interception Operations (MIO) from an Afloat Staging Base in conjunction with an overwatch craft and other friendly forces. Service life is 7 years.</p> <p>H0005 RIVERINE ACTIVITIES</p> <p>Patrol Boat (X) - The craft will support maritime security operation missions and tasks such as Harbor Approach Defense; High Value Unit Transit Escort Operations; Visit, Board, Search, and Seizure (VBSS) Operations and Overwatch; Critical Infrastructure Protection; Amphibious Operations Support; Riverine Operations; Mine Warfare Support; Embarked Forces Support (e.g., SOF, EOD, USCG LEDET); and,</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats		P-1 Line Item Number / Title: 1210 / Standard Boats
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>Humanitarian Assistance/Disaster Relief (HA/DR) Support. Twin diesel engine powered boat with a nominal length of 40ft used to patrol green water littoral zones such as coastal water approaches, bays, major rivers, ports, and harbors. Service life is 15 to 20 years.</p> <p>Riverine Multi-Mission Craft - Provides the Navy with, but not limited to, High Value Unit Escort, Maritime Infrastructure Protection; Coastal Riverine Security; Visit Board Search and Seizure (VBSS), VBSS Overwatch and/or Mine Warfare Support. Service life is 8 years.</p> <p>MK VI Patrol Boat - Naval Expeditionary Combat Command (NECC) Riverine Forces require a tactically sized, highly reliable, combatant craft capable of operating from land or maritime platforms. The mission of the MK VI is to provide the operational commander a capability to persistently patrol shallow littoral areas beyond sheltered harbors and bays, and into less sheltered open water out to the Departure Sea Area (DSA) for the purpose of force protection of friendly and coalition forces and critical infrastructure. Mission profiles may include: patrol of Maritime Pre-positioning Force (MPF) and Joint Logistics Over the Shore (JLOTS) anchorage and marshaling areas, offshore economic infrastructure Gulf Oil Platforms (GOPLATs), High-Value Asset (HVA) shipping escort, over watch of Maritime Interdiction Operations (MIO) / Vessel Board, Search and Seizure (VBSS) operations, Theater Security Cooperation (TSC), and Security Force Assistance (SFA). Service life is 7-10 years.</p> <p>H0006 SUPPORT FORCES</p> <p>7M (24ft) Rigid Inflatable Boat (RIB) - Diesel powered, primarily used as ship's lifeboats, search and rescue boats, liberty boats, and for general transportation on auxiliaries, combatants, carriers, amphibious, and shore activities. Also used for Anti-Terrorism/Force Protection (AT/FP) and Maritime Interdiction Operation/Vessel Boarding Search and Seizure (MIO/VBSS) operations. Service life is 12 years.</p> <p>H0007 FLEET LOGISTICS SUPPORT</p> <p>7M (24ft) Rigid Inflatable Boat (RIB) - Diesel powered, primarily used as ship's lifeboats, search and rescue boats, liberty boats, and for general transportation on auxiliaries, combatants, carriers, amphibious, and shore activities. Also used for Anti-Terrorism/Force Protection (AT/FP) and Maritime Interdiction Operation/Vessel Boarding Search and Seizure (MIO/VBSS) operations. Service life is 12 years.</p> <p>H0008 NAVAL COASTAL WARFARE</p> <p>Patrol Boat (small) - Light gasoline twin outboard engine powered (up to 150 HP each) aluminum boats from 7 to 8.2 meters (24 to 27 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Can operate in areas where the environment (sea states/climatology) does not present a significant challenge. Service life is 7 years.</p> <p>Patrol Boat (Large) - Twin diesel engine powered aluminum boats over 9 meters (30 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Needed in areas where the environment (sea states/climatology) necessitates a larger boat for dependability. Too heavy to meet the performance/operational requirements with outboard engines. Service life is 7 years.</p> <p>H0009 WARFARE INTEGRATION</p> <p>Dive Boat Replacement - Operations involving diving or the need to deploy support equipment at or near the water. Examples include dive operations focusing on underwater ships husbandry of Fleet assets, training, underwater survey and RDT&E, as well as, general ports and waterways operations, routine harbor maintenance and cleanup duties, and to assist in patrol, rescue, firefighting and picket operations. Aluminum hull from 50 to 60 ft, walkthrough cabin, seating for coxswain & navigator, bench seating for four passengers, bitts forward & aft, engine guard rail, dive door (stbd.), certified hoisting fittings & hoisting sling. Cabin light, sliding windows, wiper assembly, heater, Very High Frequency (VHF) radio w/hailer, spotlight, electric bilge pump, battery charger, spare parts, aluminum trailer w/pintle hitch. Service life: 15-20 years.</p> <p>H0010 POLLUTION CONTROL EQUIPMENT</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats		P-1 Line Item Number / Title: 1210 / Standard Boats
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>Oil boom Platform - 30' Boom Platform (BP) Boat used for Oil Spill Response operations, working in conjunction with 25ft UBs and Rapid Response Skimmers (RRS). Typical mission requires UB and BP to sprint to the oil spill location ahead of the RRS. After spill assessment, 24" response boom (aboard BP) is tied off to UB, which is used to payout/deploy boom to surround spill while the RRS recovers the oil. BP crew delivers and unravels the boom during oil skimming operations. Typical mission duration is 3-8 hours. Service life is 10 years.</p> <p>Utility Boats - 25' Utility Boats (UB) used for Oil Spill Response operations, working in conjunction with Boom Platforms (BPs) and Rapid Response Skimmers (RRS). Typical mission requires UB and BP to sprint to the oil spill location ahead of the RRS. After spill assessment, 24" response boom (aboard BP) is tied off to UB, which is used to payout/deploy boom to surround spill while the RRS recovers the oil. UB crew tends boom during oil skimming operations, accessing boom over low gunwales or via dive door on UB. Typical mission duration is 3-8 hours. Service life is 10 years.</p> <p>Rapid Response Skimmers - Rapid Response Skimmers (RRS) used for Oil Spill Response operations, working in conjunction with Boom Platforms (BPs) and Utility Boats (UBs). Typical mission requires UB and BP to sprint to the oil spill location ahead of the RRS. After spill assessment, 24" response boom (aboard BP) is tied off to UB, which is used to payout/deploy boom to surround spill while the RRS recovers the oil. The RRS "skims" the oil off of the top of the water and holds it in an onboard storage container for proper disposal and processing. Typical mission duration is 3-24 hours. Service life is 10 years.</p> <p>H0830 PRODUCTION ENGINEERING</p> <p>Production Engineering funds are used for engineering and technical support of boat and combatant craft acquisition and the development of integrated logistics support documentation to include technical data packages, provisioning, technical manuals, preventative maintenance documents and naval training systems plans. Technical support shall include acceptance trials, test and evaluation, inspections of production facilities, methods and quality assurance procedures and processes during and after construction. Additionally, official Navy boat inventory management, pre-delivery and post-delivery inspections and preparing documentation regarding boat and combatant craft procurement contract closeout and may be accomplished. Boats will not be safe or suitable to perform Navy boat and combatant craft missions if acquisition engineering technical support and integrated logistics support are not funded and completed. Boats will not be properly accounted for in accordance with OPNAV 4780.6E if boat inventory management is not provided.</p> <p>H0CA5 DIVE BOATS</p> <p>Operations involving diving or the need to deploy support equipment at or near the water. Examples include dive operations focusing on underwater ships husbandry of Fleet assets, training, underwater survey and RDT&E, as well as, general ports and waterways operations, routine harbor maintenance and cleanup duties, and to assist in patrol, rescue, firefighting and picket operations. Aluminum hull from 50 to 60 ft, walkthrough cabin, seating for coxswain & navigator, bench seating for four passengers, bits forward & aft, engine guard rail, dive door (stbd), certified hoisting fittings & hoisting sling. Cabin light, sliding windows, wiper assembly, heater, VHF radio w/hailer, spotlight, electric bilge pump, battery charger, spare parts, aluminum trailer w/pintle hitch. Service life: 15-20 years.</p> <p>H0CA6 RANGE SUPPORT CRAFT</p> <p>Workboat type vessel to serve US Navy Weapons Systems Training and Validation, assisting fleet operations conducting acoustical, thermal and cross-section measurements and testing. Hulls to be steel or aluminum with aluminum superstructure and corrosion resistant systems, components and hardware to operate in industrial conditions with minimal maintenance. Sea kindliness underway and while loitering for extended periods are among the primary operational requirements. A large open workspace on the after deck with a retrieval ramp providing access to the water and appropriate weapons handling machinery. Weapons systems equipment to be handled includes missiles, torpedoes, surface and air launched Remotely Operated Vehicles (ROVs) and targets. Minimal freeboard height aft is necessary for crew safety while accessing and operating the weapons retrieval mechanism without compromising stability. Habitability requirements include berthing, galley, mess, lounge, head(s), generator set(s), HVAC system and defrosters. The boat must be able to accommodate extreme loading conditions (i.e., from a full weapons load topside to light load). The boat must be as stable and as wide as possible to provide the inherent stability characteristics necessary to perform the operations and necessary to provide ergonomics for the crew and passengers. Requirements include communications, navigation and other electronics systems necessary to support the sophisticated training, validation and recording of specialized measurements to support a wide variety of operations. A Commercial Off The Shelf (COTS) boat built to recognize commercial standards can accomplish specific operational requirements for the mission. Service Life is 25 years.</p> <p>H0CAB FORCE PROTECTION BOAT (SMALL)</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats		P-1 Line Item Number / Title: 1210 / Standard Boats
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>Light gasoline twin outboard engine powered (up to 150 HP each) aluminum boats from 7 to 8.2 meters (24 to 27 ft) in length used primarily for fleet force protection, maritime interdiction, law enforcement operations, at Naval activities and adjacent ports and waterways duties. Can operate in areas where the environment (sea states/climatology) does not present a significant challenge. Service life is 7 years.</p> <p>H0G86 OCO SUPPLEMENTAL</p> <p>Current existing systems require replacements for boats due to excessive wear and tear. The boats are being maintained; however, they are not designed for the operational tempo (OPTEMPO) and harsh operating conditions in which they will be employed. The Force Protection Coastal (FPC) boats will provide capability called for in Visit, Board, Search and Seizure (VBSS) overwatch Urgent Operational Needs Statement (UONS) that cannot be met with existing boats. The Riverine Patrol boats, 7m EOD RIBS, and Force Protection Large are for boats already in theater.</p> <p>SSPBV Blocking Vessels</p> <p>Blocking Vessels - 250' Off Shore Vessels (OSVs) also referred to as Blocking Vessels (BVs) operating at each Strategic Weapons Facility (Bangor, Washington and Kings Bay, Georgia). The Blocking Vessels are a key security component in the transit of SSBNs to and from the dive point. Service Life is 25 years.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 12: Small Boats	P-1 Line Item Number / Title: 1210 / Standard Boats
--	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>
P-40a	Standard Boats	P-5a		- / 326.515	- / 180.365	- / 29.982	- / 43.684	- / -	- / 43.684
P-40	Total Gross/Weapon System Cost			- / 326.515	- / 180.365	- / 29.982	- / 43.684	- / -	- / 43.684

*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.

--

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy																Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12						P-1 Line Item Number / Title: 1210 / Standard Boats						Aggregated Items Title: Standard Boats								
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) H0001 - Base Operating Forces																				
1.1) Force Protection Small	A		3,387K	3	10.161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) CNIC Force Protection Small ^(†)	A		361,500.00	4	1.446	391,000.00	5	1.955	-	-	-	-	-	-	-	-	-	-	-	-
1.3) CNIC Force Protection Medium ^(†)	A		558,022.22	45	25.111	450,000.00	10	4.500	459,000.00	12	5.508	467,200.00	5	2.336	-	-	-	467,200.00	5	2.336
1.4) CNIC Force Protection Large	A		11,379K	3	34.136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) CNIC Workboat Medium ^(†)	A		1,125K	9	10.127	-	-	-	905,000.00	3	2.715	921,333.33	3	2.764	-	-	-	921,333.33	3	2.764
1.6) CNIC Workboat Large ^(†)	A		1,529K	3	4.587	-	-	-	1,622K	3	4.866	1,651K	3	4.954	-	-	-	1,651K	3	4.954
Subtotal: 1) H0001 - Base Operating Forces			-	-	85.568	-	-	6.455	-	-	13.089	-	-	10.054	-	-	-	-	-	10.054
2) H0002 - Amphibious Assault Ships																				
2.1) 11M (36FT) Rigid Inflatable Boat (RIB) ^(†)	A		1,134K	12	13.613	600,000.00	6	3.600	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) H0002 - Amphibious Assault Ships			-	-	13.613	-	-	3.600	-	-	-	-	-	-	-	-	-	-	-	-
3) H0003 - Explosive Ordnance Forces																				
3.1) EOD Support Craft (RIB) ^(†)	A		559,625.00	16	8.954	264,000.00	9	2.376	266,000.00	9	2.394	270,800.00	5	1.354	-	-	-	270,800.00	5	1.354
3.2) 11M EOD RIB ^(†)	A		1,800K	2	3.600	-	-	-	-	-	-	735,000.00	12	8.820	-	-	-	735,000.00	12	8.820
Subtotal: 3) H0003 - Explosive Ordnance Forces			-	-	12.554	-	-	2.376	-	-	2.394	-	-	10.174	-	-	-	-	-	10.174
4) H0004 - Naval Special Warfare																				
4.1) NSW Long Range Support Craft ^(†)	A		372,291.67	24	8.935	317,000.00	2	0.634	-	-	-	335,000.00	2	0.670	-	-	-	335,000.00	2	0.670
4.2) NSW Short Range Support Craft ^(†)	A		1,794K	3	5.382	315,000.00	5	1.575	-	-	-	333,000.00	4	1.332	-	-	-	333,000.00	4	1.332
4.3) NSW RIB ^(†)	A		975,000.00	3	2.925	1,003K	2	2.006	1,014K	4	4.056	1,032K	3	3.097	-	-	-	1,032K	3	3.097
Subtotal: 4) H0004 - Naval Special Warfare			-	-	17.242	-	-	4.215	-	-	4.056	-	-	5.099	-	-	-	-	-	5.099
5) H0005 - Riverine Activities																				
5.1) Patrol Boat (X) ^(†)	A		-	-	-	-	-	-	-	-	-	2,745K	3	8.235	-	-	-	2,745K	3	8.235
5.2) Riverine Multi-Mission Craft	A		4,085K	11	44.936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy															Date: February 2016						
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										Aggregated Items Title:						
1810N / 01 / 12					1210 / Standard Boats										Standard Boats						
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)	
5.3) MK VI Patrol Boat ^(†)	A		8,217K	3	24.651	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Subtotal: 5) H0005 - Riverine Activities			-	-	69.587	-	-	-	-	-	-	-	-	8.235	-	-	-	-	-	8.235	
6) H0006 - Support Forces																					
6.1) 7M (24FT) Rigid Inflatable Boat (RIB) ^(†)	A		363,210.53	57	20.703	193,000.00	19	3.667	195,000.00	16	3.120	198,500.00	14	2.779	-	-	-	198,500.00	14	2.779	
Subtotal: 6) H0006 - Support Forces			-	-	20.703	-	-	3.667	-	-	3.120	-	-	2.779	-	-	-	-	-	2.779	
7) H0007 - Fleet Logistics Support																					
7.1) 7M (24FT) Rigid Inflatable Boat (RIB) ^(†)	A		396,083.33	12	4.753	-	-	-	195,000.00	3	0.585	198,666.67	3	0.596	-	-	-	198,666.67	3	0.596	
Subtotal: 7) H0007 - Fleet Logistics Support			-	-	4.753	-	-	-	-	-	0.585	-	-	0.596	-	-	-	-	-	0.596	
8) H0008 - Naval Coastal Warfare																					
8.1) Reserve Patrol Boat Small	A		-	-	0.681	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8.2) Reserve Patrol Boat Large	A		1,227K	3	3.680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: 8) H0008 - Naval Coastal Warfare			-	-	4.361	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9) H0009 - Warfare Integration																					
9.1) Dive Boat Replacement ^(†)	A		1,814K	2	3.629	1,890K	1	1.890	1,927K	2	3.854	1,962K	2	3.923	-	-	-	1,962K	2	3.923	
Subtotal: 9) H0009 - Warfare Integration			-	-	3.629	-	-	1.890	-	-	3.854	-	-	3.923	-	-	-	-	-	-	3.923
10) H0010 - Pollution Control Equipment																					
10.1) Oilboom Platform ^(†)	A		-	-	-	183,000.00	2	0.366	187,000.00	1	0.187	190,500.00	2	0.381	-	-	-	190,500.00	2	0.381	
10.2) Utility Boats ^(†)	A		-	-	-	130,000.00	5	0.650	132,000.00	5	0.660	134,500.00	4	0.538	-	-	-	134,500.00	4	0.538	
10.3) Rapid Response Skimmer ^(†)	A		380,000.00	8	3.040	389,000.00	6	2.334	394,000.00	3	1.182	401,000.00	3	1.203	-	-	-	401,000.00	3	1.203	
10.4) OSR OB Engine ^(†)	A		-	-	-	-	-	-	10,000.00	2	0.020	10,000.00	2	0.020	-	-	-	10,000.00	2	0.020	
Subtotal: 10) H0010 - Pollution Control Equipment			-	-	3.040	-	-	3.350	-	-	2.049	-	-	2.142	-	-	-	-	-	2.142	
11) H0830 - Production Engineering																					
11.1) Production Engineering	A		-	-	6.253	-	-	1.443	-	-	0.380	-	-	0.299	-	-	-	-	-	0.299	
11.2) Production Engineering (Naval Coastal Warfare)	A		-	-	0.339	-	-	0.052	-	-	0.048	-	-	-	-	-	-	-	-	-	

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12 **P-1 Line Item Number / Title:** 1210 / Standard Boats **Aggregated Items Title:** Standard Boats

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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: 11) H0830 - Production Engineering			-	-	6.592	-	-	1.495	-	-	0.428	-	-	0.299	-	-	-	-	-	0.299
12) H0900 - Consulting Services																				
12.1) Consulting Services	A		-	-	5.424	-	-	0.372	-	-	0.396	-	-	0.383	-	-	-	-	-	0.383
12.2) Consulting Services (Naval Coastal Warfare)	A		-	-	0.264	-	-	0.025	-	-	0.011	-	-	-	-	-	-	-	-	-
Subtotal: 12) H0900 - Consulting Services			-	-	5.688	-	-	0.397	-	-	0.407	-	-	0.383	-	-	-	-	-	0.383
13) H0CA5 - Dive Boats																				
13.1) Dive Boats	A		2,259K	3	6.777	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 13) H0CA5 - Dive Boats			-	-	6.777	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14) H0CA6 - Range Supprt Craft																				
14.1) Range Support Craft	A		18,362K	2	36.723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 14) H0CA6 - Range Supprt Craft			-	-	36.723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15) H0CAB - Force Protection Boat (Small)																				
15.1) Force Protection Boat (Small)	A		-	-	2.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.2) Small Escort Vessels (33')	A		-	-	9.979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 15) H0CAB - Force Protection Boat (Small)			-	-	11.979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16) H0G86 - OCO																				
16.1) OCO - Patrol Boat (Large) (Reserve)	A		651,000.00	2	1.302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.2) OCO - RIBS	A		500,000.00	2	1.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.3) OCO - 7M EOD RIBs (Reserve)	A		234,000.00	6	1.404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.4) OCO - Force Protection - Coastal (Reserve)	A		4,000K	5	20.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 16) H0G86 - OCO			-	-	23.706	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17) SSPBV																				
17.1) Blocking Vessels	A		-	-	-	38,230K	4	152.920	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 17) SSPBV			-	-	0.000	-	-	152.920	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	326.515	-	-	180.365	-	-	29.982	-	-	43.684	-	-	-	-	-	43.684

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

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12	P-1 Line Item Number / Title: 1210 / Standard Boats	Aggregated Items Title: Standard Boats

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12				P-1 Line Item Number / Title: 1210 / Standard Boats				Aggregated Items: Standard Boats				
Item Number / Title [DODIC]	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) H0001 - Base Operating Forces												
1.2) CNIC Force Protection Small		2015	Metal Craft Marine, Inc. / Cape Vincent NY	C / FFP	NAVSEA	Aug 2015	Mar 2016	5	391,000.00	N		
1.3) CNIC Force Protection Medium		2015	Gravois Aluminum Boats / Jeanerette, LA	C / IDIQ	NAVSEA	Jun 2015	Nov 2015	10	450,000.00	N		
1.3) CNIC Force Protection Medium		2016	TBD / TBD	C / IDIQ	NAVSEA	May 2016	Dec 2016	12	459,000.00	N		
1.3) CNIC Force Protection Medium		2017	TBD / TBD	C / IDIQ	NAVSEA	Jun 2017	Jan 2018	5	467,200.00	N		
1.5) CNIC Workboat Medium		2014	Marine Group / Chula Vista, CA	C / FFP	NAVSEA	Jul 2014	Jun 2016	2	862,000.00	N		
1.5) CNIC Workboat Medium		2016	TBD / TBD	C / IDIQ	NAVSEA	Jun 2016	Dec 2016	3	905,000.00	N		
1.5) CNIC Workboat Medium		2017	TBD / TBD	C / IDIQ	NAVSEA	Jun 2017	Dec 2017	3	921,333.33	N		
1.6) CNIC Workboat Large		2014	Marine Group / Chula Vista, CA	C / FFP	NAVSEA	Aug 2014	Jan 2016	3	1,529K	N		
1.6) CNIC Workboat Large		2016	TBD / TBD	C / IDIQ	NAVSEA	Jun 2016	Sep 2017	3	1,622K	N		
1.6) CNIC Workboat Large		2017	TBD / TBD	C / IDIQ	NAVSEA	Jul 2017	Oct 2018	3	1,651K	N		
2) H0002 - Amphibious Assault Ships												
2.1) 11M (36FT) Rigid Inflatable Boat (RIB)		2015	Willard Marine / Anaheim, CA	C / FFP	NAVSEA	May 2015	Feb 2016	6	600,000.00	N		
3) H0003 - Explosive Ordnance Forces												
3.1) EOD Support Craft (RIB)		2015	Brunswick Commercial & Government Production / Edgewater, FL	C / FFP	NAVSEA	Apr 2015	Oct 2015	9	264,000.00	N		
3.1) EOD Support Craft (RIB)		2016	TBD / TBD	C / IDIQ	NAVSEA	Jul 2016	Jan 2017	9	266,000.00	N		
3.1) EOD Support Craft (RIB)		2017	TBD / TBD	C / IDIQ	NAVSEA	Jun 2017	Dec 2017	5	270,800.00	N		
3.2) 11M EOD RIB		2017	TBD / TBD	C / FFP	NAVSEA	Jul 2017	Jan 2018	12	735,000.00	N		
4) H0004 - Naval Special Warfare												
4.1) NSW Long Range Support Craft		2015	Silverships / Theodore, AL	C / IDIQ	NAVSEA	Feb 2015	Oct 2015	2	317,000.00	N		
4.1) NSW Long Range Support Craft		2017	TBD / TBD	C / IDIQ	NAVSEA	Jun 2017	Dec 2017	2	335,000.00	N		
4.2) NSW Short Range Support Craft		2015	Workskiff / Woolley, WA	C / IDIQ	NAVSEA	Feb 2015	Sep 2015	5	315,000.00	N		
4.2) NSW Short Range Support Craft		2017	TBD / TBD	C / IDIQ	NAVSEA	Jun 2017	Jan 2018	4	333,000.00	N		
4.3) NSW RIB		2015	USMI / Gulport, MS	C / IDIQ	NAVSEA	Feb 2015	Mar 2016	2	1,003K	N		
4.3) NSW RIB		2016	USMI / Gulport, MS	C / IDIQ	NAVSEA	Dec 2015	Jan 2017	4	1,014K	N		
4.3) NSW RIB		2017	TBD / TBD	C / FFP	NAVSEA	Jun 2017	Dec 2017	3	1,032K	N		
5) H0005 - Riverine Activities												
5.1) Patrol Boat (X)		2017	TBD / TBD	C / IDIQ	NAVSEA	Jul 2017	May 2018	3	2,745K	N		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 12			P-1 Line Item Number / Title: 1210 / Standard Boats					Aggregated Items: Standard Boats				
Item Number / Title [DODIC]	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
5.3) MK VI Patrol Boat		2013	Safeboats / Port Orchard, WA	C / FFP	NAVSEA	Jan 2013	Feb 2016	1	6,489K	N		
6) H0006 - Support Forces												
6.1) 7M (24FT) Rigid Inflatable Boat (RIB)		2015	Willard Marine / Anaheim, CA	C / FFP	NAVSEA	Nov 2014	Sep 2015	19	193,000.00	N		
6.1) 7M (24FT) Rigid Inflatable Boat (RIB)		2016	Willard Marine / Anaheim, CA	C / FFP	NAVSEA	Dec 2015	Oct 2016	16	195,000.00	N		
6.1) 7M (24FT) Rigid Inflatable Boat (RIB)		2017	TBD / TBD	C / FFP	NAVSEA	May 2017	Dec 2017	14	198,500.00	N		
7) H0007 - Fleet Logistics Support												
7.1) 7M (24FT) Rigid Inflatable Boat (RIB)		2016	Willard Marine / Anaheim, CA	C / FFP	NAVSEA	Dec 2015	May 2016	3	195,000.00	N		
7.1) 7M (24FT) Rigid Inflatable Boat (RIB)		2017	TBD / TBD	C / FFP	NAVSEA	May 2017	Dec 2017	3	198,666.67	N		
9) H0009 - Warfare Integration												
9.1) Dive Boat Replacement		2013	Marine Group / Chula Vista, CA	C / IDIQ	NAVSEA	Oct 2014	Oct 2015	2	1,814K	N		
9.1) Dive Boat Replacement		2015	Marine Group / Chula Vista, CA	C / IDIQ	NAVSEA	Oct 2014	Oct 2015	1	1,890K	N		
9.1) Dive Boat Replacement		2016	Marine Group / Chula Vista, CA	C / IDIQ	NAVSEA	Oct 2015	Oct 2016	2	1,927K	N		
9.1) Dive Boat Replacement		2017	TBD / TBD	C / IDIQ	NAVSEA	May 2017	Dec 2017	2	1,962K	N		
10) H0010 - Pollution Control Equipment												
10.1) Oilboom Platform		2015	Metal Craft Marine, Inc. / Cape Vincent NY	C / IDIQ	NAVSEA	Sep 2015	Jun 2016	2	183,000.00	N		
10.1) Oilboom Platform		2016	TBD / TBD	C / IDIQ	NAVSEA	Jul 2016	Jan 2017	1	187,000.00	N		
10.1) Oilboom Platform		2017	TBD / TBD	C / IDIQ	NAVSEA	Mar 2017	Sep 2017	2	190,500.00	N		
10.2) Utility Boats		2015	Metal Craft Marine, Inc. / Cape Vincent NY	C / IDIQ	NAVSEA	Sep 2015	Apr 2016	5	130,000.00	N		
10.2) Utility Boats		2016	TBD / TBD	C / IDIQ	NAVSEA	Jul 2016	Dec 2016	5	132,000.00	N		
10.2) Utility Boats		2017	TBD / TBD	C / IDIQ	NAVSEA	Mar 2017	Aug 2017	4	134,500.00	N		
10.3) Rapid Response Skimmer		2015	Kvichak Marine / Seattle, WA	C / IDIQ	NAVSEA	Mar 2015	Jan 2016	6	389,000.00	N		
10.3) Rapid Response Skimmer		2016	TBD / TBD	C / IDIQ	NAVSEA	Jul 2016	Jan 2017	3	394,000.00	N		
10.3) Rapid Response Skimmer		2017	TBD / TBD	C / IDIQ	NAVSEA	May 2017	Nov 2017	3	401,000.00	N		
10.4) OSR OB Engine		2016	TBD / TBD	PO	NAVSEA	Jun 2016	Nov 2016	2	10,000.00	N		
10.4) OSR OB Engine		2017	TBD / TBD	PO	NAVSEA	Jun 2017	Nov 2017	2	10,000.00	N		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 13: Training Equipment	P-1 Line Item Number / Title: 1320 / Other Ships Training 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	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
<i>Procurement Quantity (Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gross/Weapon System Cost (\$ in Millions)</i>	159.996	17.152	62.358	-	-	-	-	-	-	-	Continuing	Continuing
<i>Less PY Advance Procurement (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Net Procurement (P-1) (\$ in Millions)</i>	159.996	17.152	62.358	-	-	-	-	-	-	-	Continuing	Continuing
<i>Plus CY Advance Procurement (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	159.996	17.152	62.358	-	-	-	-	-	-	-	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

<i>Initial Spares (\$ in Millions)</i>	-	-	-	-	-	-	-	0.073	0.087	0.086	Continuing	Continuing
<i>Flyaway Unit Cost (\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gross/Weapon System Unit Cost (\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The equipment procured under the Other Ships Training Equipment line supports Hull, Mechanical, and Electrical (HM&E) and Combat Systems training requirements.

[P40A / (H5265) SURFACE SUSTAINING TTE]: Funds procure Hull Mechanical & Electrical (HM&E) and Combat System technical training equipment (TTE) identified by the Naval Education & Training Command (NETC) for the training activities. Provides equipment to augment existing TTE due to increased student throughput; replaces equipment beyond economical repair and procures new equipment.

[P40A / (H5374) LCS SEAFRAME SIMULATORS]: Funds procure LCS Simulators for the respective LCS homeports and the Surface Warfare Officer School (SWOS), in Newport, RI. Simulators are needed to meet the Train to Qualify Key Performance Parameter (KPP) requirement of the Capabilities Development Document. Funding procures hardware and software associated with building the trainers and installing this hardware and software at the LCS Training Facilities in each homeport and at SWOS. Trainers are required for both of the ship variants, with initial procurements for the San Diego homeport and SWOS, followed by procurements for the Mayport and Norfolk homeports within the FYDP. Throughput of LCS crews requires multiple simulators in a homeport.

LCS Part Task Trainers - Devices that permit selected aspects of a task (Bridge, Combat Systems, Mission Bay Components) to be practiced independently of other elements of the task, and independently of the Intergrated Tactical Trainers (ITTs) to most efficiently address Train to Qualify (T2Q) and Train to Certify (T2C) objectives while managing student throughput.

LCS Virtual Ship Training System - Comprehensive network infrastructure and computing environment, including Virtual Reality Labs (VRLs), within the LCS Training Facilities to support delivery and management of all components of LCS Training.

LCS Mission Bay Trainers - Enable the qualification, training, and team certification of the individuals and teams working in the Mission Bay, to include preparation and launching/recovering of mission module off-hull remote vehicles, and operating of the cranes, doors, and other associated equipment in the Mission Bay. The Mission Bay Trainer includes full-scale replicas of the Mission Bay. FY16 funding supports outfitting the LCS Training Facility in Mayport, FL. (The first ship assigned to Mayport, LCS 9, arrives in FY16.)

LCS Integrated Tactical Trainers - These are full scale simulations of Tactical Software that enable integrated team training of Bridge, Combat Systems, Engineering, and Mission Package systems/watchstations. Follow-on Integrated Team Trainer procurement (FY16 and follow) will include crew served weapon simulators (discussed below). FY16 funds the procurement of one FREEDOM variant Integrated Team Trainer for Mayport and a second INDEPENDENCE variant Integrated Team Trainer for San Diego (for a total of two (2) Integrated Team Trainers procured in FY16).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 13: Training Equipment		P-1 Line Item Number / Title: 1320 / Other Ships Training 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	Item MDAP/MAIS Code(s): N/A	
<p>Surface Warfare Officer School (SWOS) Bridge Trainer - This trainer supports Officer pipeline training at SWOS, Newport in support of Division Officer, Department Head, and PXO/PCO pipeline training for Officer of the Deck Training. This trainer permits selected aspects of Bridge tasks (including Engineering Control tasks) to be practiced independently of Combat Systems Operations to support individual or individual bridge team training, vice the integrated training in the more complex Integrated Team Trainer. This training facilitates more efficient accomplishment of Train to Certify and Train to Qualify objectives.</p> <p>Crew Served Weapons Simulators - Funds procure tactical training crew served weapons stations. Stand-alone units will be procured for follow-on integration with the Integrated Team Trainers in San Diego and Mayport.</p> <p>[P40A / (H5276) SUBSURFACE SUSTAINING TTE]: Funds procure Subsurface HM&E Fleet and Team Trainer Technical Training Equipment (TTE), Training Enhancement Changes (TECs), support equipment, and various upgrades to simulators / stimulators, such as the Submarine Bridge Trainer (SBT), Submarine Ship Control Operator Trainer (SCOT), and Next Generation Firefighter Trainer (FFT) identified by the Submarine Learning Center (SLC) and approved by Chief of Naval Operations (CNO), for use at the submarine training activities. This TTE/Training Unique Equipment (TUE), sustains a better quality of training and replaces equipment beyond economical repair or procures new equipment. Funds also procure Submarine High Risk Trainer procurement for Pressurized Submarine Escape Trainers and Damage Control Wet Trainers.</p> <p>Fleet Interactive Display Equipment (FIDE) trainers are provided for nuclear power plant training. FIDEs support multiple ship classes and FIDE configurations at 9 different geographic sites, each requiring different levels of installation work; thus the cost for the program varies widely from year to year depending on the combination of these factors. Virginia (VA) Class trainers are procured for the 2nd and 3rd home ports and for configuration updates to existing trainers.</p> <p>[P40A / NEXT GENERATION FIRE FIGHTER TRAINER]: TYCOM approved the requirement and funding to replace all existing Firefighter Trainers with a new Firefighter Trainer that meets the rigors of the USS MIAMI Flag Panel Fire Review. The Next Generation Firefighter Trainer is the replacement trainer for all seven submarine sites.</p> <p>Funds will procure the Next Generation Firefighting Trainers that will permit high temperature environments and multi-level firefighting scenarios for Submarine Crews to rehearse basic and team firefighting proficiency. This trainer will replace the brick and mortar low temperature firefighting trainers that have reached end of service life.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 13: Training Equipment	P-1 Line Item Number / Title: 1320 / Other Ships Training 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	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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			- / 159.996	- / 17.152	- / 62.358	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 159.996	- / 17.152	- / 62.358	- / -	- / -	- / -

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

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

Justification:
 Funding for surface ship training devices is consolidated under LI 5664 starting in FY17.
 Funding for submarine training devices is consolidated under LI 5661 starting in FY17.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 13 **P-1 Line Item Number / Title:** 1320 / Other Ships Training Equipment **Aggregated Items Title:** Other Ships Training Equipment

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) (H5265) SURFACE SUSTAINING TTE																				
1.1) SURFACE SUSTAINING TTE	A		-	-	10.994	-	-	0.705	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) (H5265) SURFACE SUSTAINING TTE			-	-	10.994	-	-	0.705	-	-	-	-	-	-	-	-	-	-	-	-
2) (H5374) LCS SEAFRAME SIMULATORS																				
2.1) LCS PART TASK TRAINERS	A		-	-	-	-	-	2.000	-	-	-	-	-	-	-	-	-	-	-	-
2.2) LCS VIRTUAL SHIP TRAINING SYSTEM	A		-	-	-	-	-	3.000	-	-	4.000	-	-	-	-	-	-	-	-	-
2.3) LCS MISSION BAY TRAINERS	A		-	-	39.226	-	-	-	-	-	11.817	-	-	-	-	-	-	-	-	-
2.4) LCS INTERGRATED TACTICAL TRAINERS	A		-	-	25.311	-	-	4.630	-	-	38.034	-	-	-	-	-	-	-	-	-
2.5) SWOS Bridge Trainer	A		-	-	1.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.6) Crew Served Weapons Simulators	A		-	-	-	-	-	-	-	-	1.000	-	-	-	-	-	-	-	-	-
Subtotal: 2) (H5374) LCS SEAFRAME SIMULATORS			-	-	66.037	-	-	9.630	-	-	54.851	-	-	-	-	-	-	-	-	-
3) (H5276) SUBSURFACE SUSTAINING TTE																				
3.1) FIDE CVN	A		-	-	14.997	-	-	3.490	-	-	3.409	-	-	-	-	-	-	-	-	-
3.2) FIDE SUB	A		-	-	26.436	-	-	1.929	-	-	3.056	-	-	-	-	-	-	-	-	-
3.3) SUSTAINING TTE	A		-	-	36.049	-	-	0.374	-	-	0.386	-	-	-	-	-	-	-	-	-
3.4) SCOT	A		-	-	5.483	-	-	1.024	-	-	0.656	-	-	-	-	-	-	-	-	-
Subtotal: 3) (H5276) SUBSURFACE SUSTAINING TTE			-	-	82.965	-	-	6.817	-	-	7.507	-	-	-	-	-	-	-	-	-
Total			-	-	159.996	-	-	17.152	-	-	62.358	-	-	-	-	-	-	-	-	-

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

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 14: Production Facilities Equipment	P-1 Line Item Number / Title: 1445 / Operating Forces IPE
---	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	483.081	39.306	58.138	75.421	-	75.421	65.296	66.688	68.131	69.487	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	483.081	39.306	58.138	75.421	-	75.421	65.296	66.688	68.131	69.487	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	483.081	39.306	58.138	75.421	-	75.421	65.296	66.688	68.131	69.487	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Decrease in Operating Forces IPE by \$3.18M as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

The Operating Forces IPE budget provides funding for capitalized personal property procurements for the Naval Shipyards and Fleet I-level maintenance activities. These procurements provide new and efficiency-enabling equipment required to support submarine, CVN, and surface ship maintenance, eliminating reliance on significantly aged and obsolete equipment. Modernizing equipment infrastructure improves maintenance activity productivity, eliminates workaround and mitigation costs to the Fleet, contributes to decreasing CVN, surface ship, and submarine availability cost and schedule, and improves operational availability.

This budget also funds procurement and technical refresh upgrades of all Integrated Condition Assessment System (ICAS) hardware and software aboard Surface Fleet hulls and the Navy Maritime Maintenance Enterprise Solution (NMMES). NMMES is a strategic investment that has standardized NAVSEA and Fleet ship maintenance functions ashore, controlling and managing all aspects of ship maintenance at the Naval Shipyards, Regional Maintenance Centers (RMCs), and Ship Repair Facilities.

[P40A / KN100: INDUSTRIAL PLANT EQUIPMENT (IPE) REPLACEMENT/AFLOAT SUPPORT]: These funds are used to procure industrial plant equipment for afloat (surface combatant) activities which provide maintenance capabilities for Sailors to maintain Ship's mission essential, operational readiness while deployed. The upgraded IPE increases deployed maintenance capability and enhances strike group's ability to remain on station through Casualty Report (CASREP) avoidance. The program provides new industrial plant equipment to replace equipment beyond economical repair and to upgrade capabilities for ship maintenance and repair.

[P40A / KN200: NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION]: This funding supports the Navy Maritime Maintenance Enterprise Solution (NMMES) Initiative. NMMES is an operational, sustainment, technical refresh, and modernization strategic investment that has standardized NAVSEA and Fleet ship maintenance functions ashore, controlling and managing all aspects of ship maintenance at the Naval Shipyards, Regional Maintenance Centers (RMCs), and Ship Repair Facilities. NMMES manages finance, supply, personnel, time & attendance, repair work processes & planning, scheduling and execution, shop work flow, configuration management, environmental health & safety, quality assurance, up-line management reporting and other functions. NMMES standardizes and institutionalizes the Navy's ship maintenance business practice processes. These processes are fully embedded in the NMMES IT systems to gain efficiencies in the maintenance process. NMMES systems provide the functionality and processes to continually address the maintenance needs of the Fleet, and have a critical role in the efficient brokering, planning, material ordering, financial performance, and execution of shore maintenance. This funding will support procurement of commercial-off-the-shelf (COTS) hardware and software in support of NMMES IT systems, including the Electronic Technical Work Document (ETWD) initiative.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 14: Production Facilities Equipment		P-1 Line Item Number / Title: 1445 / Operating Forces IPE
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)]: This line item provides funding for the Shipyard Capital Investment Program in support of the consolidated Naval Shipyard and Intermediate Maintenance Facilities (IMF) at the four mission funded Naval Shipyards. Funds will be used for the procurement and execution of Class 3 & 4 plant and personal property projects to maintain, modernize and improve the infrastructure and industrial base at the mission funded Naval Shipyard/IMF activities. Funding will allow for the acquisition of equipment and OP,N related Automated Data Processing (ADP) Hardware/Software necessary to perform the mission of repairing, conversion, and modernization of fleet ships and submarines in the most economical, efficient, environmentally sound and safe manner possible.</p> <p>[P40A / SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)]: FY17 funding above FY16 level is required for additional equipment procurements needed to support CVN and submarine depot maintenance availability schedules at the Naval Shipyards, is necessary to achieve a reasonable recapitalization rate, and supports the 6% investment statutory requirement. These additional requirements include:</p> <p>PNSY DRY DOCK #1 DEFUELING COMPLEX: Required to support simultaneous VIRGINIA Class Depot maintenance availabilities and concurrent LOS ANGELES Class inactivations.</p> <p>NNSY and PSNSY 60 TON DOCK CRANES SERVICE LIFE EXTENSIONS (4 TOTAL) - Integral to waterfront operations. Dock cranes perform 8,000 lifts per submarine availability supporting critical path maintenance operations. \$2.3M service life extensions offer significant savings in comparison to \$18M - \$20M new crane procurements.</p> <p>PSNSY 25 TON PORTAL CRANE PROCUREMENT - Integral to OHIO Class maintenance at delta pier. Existing aged and obsolete portal cranes do not support all necessary weight handling requirements at IMF Bangor. Previous attempts to procure this portal crane in FY15 and FY16 were deferred due to program funding reductions.</p> <p>[P40A / KN400: SHIP MAINTENANCE INVESTMENT PROGRAM]: This line item provides funding to support capital investments for the Regional Maintenance Centers (RMCs) and Trident Refit Facility (TRF) Kings Bay (KB). Funds will be used for the procurement and execution of personal property projects (including Industrial Plant Equipment (IPE), IT HW/SW, portal/bridge cranes, MILCON collateral equipment, etc.) of a capital nature (greater than \$250K) to maintain and modernize the ship maintenance industrial base, with a focus on reducing total ownership costs. These personal property projects are required for the RMCs and TRF KB to perform their mission of repairing, conversion, and modernization of fleet ships and submarines.</p> <p>[P40A / KN504: Commander, U.S. Pacific Fleet (PACFLT)]: These funds are used by PACFLT to procure investment items required to maintain and modernize the Fleet's ship maintenance industrial base with a focus on reducing total ownership costs.</p> <p>[P40A / Load Bank System, X-51]: Tests capability of ships onboard generators.</p> <p>[P40A / Link 16 System, C-190]: Evaluates capability of ships Link16 data communication system.</p> <p>[P40A / Heat and Vacuum System, X-51]: Dries parts and equipment quickly and effectively under heat and vacuum.</p> <p>[P40A / Environmental Welding Chamber]: Environmental Welding Chamber is an environmentally controlled chamber for doing titanium welding.</p> <p>[P40A / Burning Oven]: The Burning Oven is used to burn out old paint from work pieces before repair.</p> <p>[P40A / CNC Plasma Cutting Machine]: CNC Plasma Cutting Machine</p> <p>[P40A / LOX/LIN Provider]: The LOX/LIN Provider is a mobile nitrogen charger to submarines berthed at pier.</p> <p>[P40A / CNC Lathe]: CNC Lathe utilizes computer numerical control (CNC) and is used to shape a workpiece by rotating it around a horizontal axis.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 14: Production Facilities Equipment		P-1 Line Item Number / Title: 1445 / Operating Forces IPE
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / Boring, Drilling and Milling (BDM) Machine]: Boring, Drilling and Milling (BDM) Machine used for boring, drilling and milling work pieces of various materials such as heating exchanger tube sheet, AMMO elevator platform and rader foundation.</p> <p>[P40A / Metal Gear Shaper]: Metal Gear Shaper</p> <p>[P40A / Parts Cleaning Machine]: The parts cleaning machine is used to clean sensitive parts such as optical parts for periscope.</p> <p>[P40A / Propeller Shaft Lathe]: Propeller Shaft Lathe replaces obsolete equipment intially installed in the 1940s.</p> <p>[P40A / Optical Emission Mass (OEM) Spectrometer]: Provides upgraded accuracy, precision and reliability with updated technologies to improve laboratory services.</p> <p>[P40A / Horizontal Boring Machine, X-31]: This equipment is used for boring work pieces such as a water break cover of catapult for aircraft carrier and the foundation of emergency diegel generator.</p> <p>[P40A / Vertical Slotting Machine]: The equipment is used for grinding a keyway.</p> <p>[P40A / High Pressure Air Compressor, C950]: Provides High Pressure Air supplied to submarines.</p> <p>[P40A / DD # 5 & 6 Vertical Reciprocating Conveyor]: Equipment to transfer the materials between dock side and ships.</p> <p>[P40A / Abrasive Blast and Recovery System, X-71]: Equipment to be utilized in the blasting of a ship's tank.</p> <p>[P40A / Dehumidifier / Dust Collecting System]: System controls the humidity of ship's tank during blasting and painting.</p> <p>[P40A / Gas Chromatograph Mass Spectrometer (GC-MS)]: GC-MS will provide upgraded acuracy, precision and reliability with updated technologies to maintain the laboratory capability in testing High Quality Water supplied to CVN.</p> <p>[P40A / Scanning Electron Microscope (SEM)]: SEM will provide upgraded accuracy, precision, reliability and image resolution with updated technologies to improve laboratory services.</p> <p>[P40A / 60 Ton Portal Crane #1 for Berth 5 Upgrade]: 60 ton portal crane #1 for Berth 5 upgrade to support 7th Fleet ship maintenance and repair.</p> <p>[P40A / 60 Ton Portal Crane #2 for Berth 5 Upgrade]: 60 ton portal crane #2 for Berth 5 upgrade to support 7th Fleet ship maintenance and repair.</p> <p>[P40A / Paint Booth, S950]: Enclosure containing a flammable or combustibile spraying operation, limiting the escape of paint, vapor, and residue by means of a powered exhausted system.</p> <p>[P40A / N2 Charging Unit]: Mobile equipment for the charging of nitrogen systems of visiting submarines.</p> <p>[P40A / Thermal Dry Oven, X56]: Equipment cures electrostatically applied powder coating by means of a controlled environment.</p> <p>[P40A / Burning Oven, X56]: Equipment removes residue paint, which is not removed by mechanical means, by use of high temperature prior to powder coating.</p> <p>[P40A / Machining Center, S950]: Multi-access CNC milling machine with automatic tool changing facilities.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 14: Production Facilities Equipment		P-1 Line Item Number / Title: 1445 / Operating Forces IPE
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / Blasting Machine, X56]: Equipment removes paint from items by use of hard media prior to powder-coating or repainting.</p> <p>[P40A / Curing Oven, X71]: Equipment cures paint coatings by means of a controlled environment.</p> <p>[P40A / High Pressure Air Compressor, X99]: Equipment provides high pressure, clean air for naval ships while overhauling ship's systems.</p> <p>[P40A / KN800: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) NEW INSTALL]: Funding procures all new installations of the Integrated Condition Assessment System (ICAS) hardware and software aboard Surface Fleet hulls. New Installation include: ICAS workstation hardware (including Palm Pilot Portable Data Terminal (PDTs)), latest version of ICAS system software, Configuration Data Set (CDS) (including the implementation of developed enhancements), firewall (if applicable), remote monitoring utility (RMU), ILS and ship's force training. Manage contractor efforts, prepare installation plans, perform ship checks, procure material, oversee shipboard installation and Quality Assurance (QA), develop/implement CDS, install/test all software and CDSs, provide ship's force training.</p> <p>[P40A / KN900: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) TECH REFRESH]: Funding procures all technical refresh upgrades of the Integrated Condition Assessment System (ICAS) hardware and software aboard Surface Fleet hulls. Upgrades will include: ICAS workstation hardware (including Palm Pilot Portable Data Terminal (PDTs)), latest version of ICAS system software, Configuration Data Set (CDS) groom (including the implementation of developed enhancements), firewall (if applicable), remote monitoring utility (RMU), and ship's force refresher training. Manage contractor efforts, prepare installation plans, perform ship checks, procure material, oversee shipboard installation and Quality Assurance (QA), develop/implement CDS updates, install/test all software and CDSs, provide ship's force training.</p> <p>[P40A / KN505 - Joint Ops Center- PACOM]: This is a Classified Program</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 14: Production Facilities Equipment	P-1 Line Item Number / Title: 1445 / Operating Forces IPE
---	---

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

Line Item MDAP/MAIS Code: N/A	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Operating Forces IPE	P-5a, P-21		- / 483.081	- / 39.306	- / 58.138	- / 75.421	- / -	- / 75.421
P-40	Total Gross/Weapon System Cost			- / 483.081	- / 39.306	- / 58.138	- / 75.421	- / -	- / 75.421

*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.

--

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14 **P-1 Line Item Number / Title:** 1445 / Operating Forces IPE **Aggregated Items Title:** Operating Forces IPE

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) KN100: INDUSTRIAL PLANT EQUIPMENT (IPE) REPLACEMENT/AFLOAT SUPPORT																				
1.1) AFLOAT IPE SUPPORT (BFIMA UPGRADE) - SURFACE SUPPORT	A		-	-	2.156	-	-	0.295	-	-	0.300	-	-	-	-	-	-	-	-	-
Subtotal: 1) KN100: INDUSTRIAL PLANT EQUIPMENT (IPE) REPLACEMENT/AFLOAT SUPPORT			-	-	2.156	-	-	0.295	-	-	0.300	-	-	-	-	-	-	-	-	-
2) KN200: NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION																				
2.1) NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION SUPPORT	A		-	-	4.845	-	-	2.850	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) KN200: NAVY MARITIME MAINTENANCE ENTERPRISE SOLUTION			-	-	4.845	-	-	2.850	-	-	-	-	-	-	-	-	-	-	-	-
3) KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)																				
3.1) SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)	A		-	-	452.839	-	-	24.669	-	-	38.300	-	-	60.112	-	-	-	-	-	60.112
Subtotal: 3) KN300: SHIPYARD CAPITAL INVESTMENT PROGRAM (CIP)			-	-	452.839	-	-	24.669	-	-	38.300	-	-	60.112	-	-	-	-	-	60.112
4) KN400: SHIP MAINTENANCE INVESTMENT PROGRAM																				
4.1) SHIP MAINTENANCE INVESTMENT PROGRAM	A		-	-	7.990	-	-	3.909	-	-	6.223	-	-	6.061	-	-	-	-	-	6.061
Subtotal: 4) KN400: SHIP MAINTENANCE INVESTMENT PROGRAM			-	-	7.990	-	-	3.909	-	-	6.223	-	-	6.061	-	-	-	-	-	6.061
5) KN504: Commander, U.S. Pacific Fleet (PACFLT)																				
5.1) Load Bank System, X-51 ^(†)	A		-	-	-	500,000.00	1	0.500	-	-	-	-	-	-	-	-	-	-	-	-
5.2) Link 16 System, C-190 ^(†)	A		-	-	-	1,806K	1	1.806	-	-	-	-	-	-	-	-	-	-	-	-
5.3) Heat and Vacuum System, X-51 ^(†)	A		-	-	-	500,000.00	1	0.500	-	-	-	-	-	-	-	-	-	-	-	-
5.4) Environmental Welding Chamber ^(†)	A		-	-	-	-	-	-	300,000.00	1	0.300	-	-	-	-	-	-	-	-	-
5.5) Burning Oven ^(†)	A		-	-	-	-	-	-	700,000.00	1	0.700	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14 **P-1 Line Item Number / Title:** 1445 / Operating Forces IPE **Aggregated Items Title:** Operating Forces IPE

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
5.6) CNC Plasma Cutting Machine ^(†)	A		-	-	-	1,243K	1	1.243	415,000.00	1	0.415	-	-	-	-	-	-	-	-	
5.7) LOX/LIN Provider ^(†)	A		-	-	-	-	-	-	700,000.00	2	1.400	-	-	-	-	-	-	-	-	
5.8) CNC Lathe ^(†)	A		-	-	-	-	-	-	900,000.00	1	0.900	-	-	-	-	-	-	-	-	
5.9) Boring, Drilling and Milling (BDM) Machine ^(†)	A		-	-	-	-	-	-	2,233K	1	2.233	-	-	-	-	-	-	-	-	
5.10) Metal Gear Shaper ^(†)	A		-	-	-	-	-	-	400,000.00	1	0.400	-	-	-	-	-	-	-	-	
5.11) Parts Cleaning Machine ^(†)	A		-	-	-	-	-	-	700,000.00	1	0.700	-	-	-	-	-	-	-	-	
5.12) Propeller Shaft Lathe ^(†)	A		-	-	-	-	-	-	-	-	-	5,834K	1	5.834	-	-	-	5,834K	1	5.834
5.13) Optical Emission Mass (OEM) Spectrometer ^(†)	A		-	-	-	-	-	-	-	-	-	300,000.00	1	0.300	-	-	-	300,000.00	1	0.300
Subtotal: 5) KN504: Commander, U.S. Pacific Fleet (PACFLT)			-	-	0.000	-	-	4.049	-	-	7.048	-	-	6.134	-	-	-	-	-	6.134
6) KN800: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) NEW INSTALL																				
6.1) INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS)	A		-	-	5.451	-	-	2.161	-	-	2.063	-	-	0.662	-	-	-	-	-	0.662
Subtotal: 6) KN800: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) NEW INSTALL			-	-	5.451	-	-	2.161	-	-	2.063	-	-	0.662	-	-	-	-	-	0.662
7) KN900: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) TECH REFRESH																				
7.1) INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS)	A		-	-	9.800	-	-	1.373	-	-	1.604	-	-	1.492	-	-	-	-	-	1.492
Subtotal: 7) KN900: INTEGRATED CONDITION ASSESSMENT SYSTEM (ICAS) TECH REFRESH			-	-	9.800	-	-	1.373	-	-	1.604	-	-	1.492	-	-	-	-	-	1.492
8) KN505 - Joint Ops Center- PACOM⁽¹⁾																				
8.1) Joint Operations Center	A		-	-	-	-	-	-	-	-	2.600	-	-	0.960	-	-	-	-	-	0.960
Subtotal: 8) KN505 - Joint Ops Center- PACOM			-	-	0.000	-	-	-	-	-	2.600	-	-	0.960	-	-	-	-	-	0.960
Total			-	-	483.081	-	-	39.306	-	-	58.138	-	-	75.421	-	-	-	-	-	75.421

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

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	P-1 Line Item Number / Title: 1445 / Operating Forces IPE	Aggregated Items Title: Operating Forces IPE

Footnotes:

⁽¹⁾ This is a Classified Program

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14 **P-1 Line Item Number / Title:** 1445 / Operating Forces IPE **Aggregated Items:** Operating Forces IPE

Item Number / Title [DODIC]	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
5) KN504: Commander, U.S. Pacific Fleet (PACFLT)												
5.1) Load Bank System, X-51		2015	TBD ⁽²⁾ / TBD	C / FP	NAVSUP FLC Puget	Mar 2016	Sep 2017	1	500,000.00	N	Jul 2015	
5.2) Link 16 System, C-190		2015	Via Sat / TBD	C / FP	SPAWAR	Dec 2014	Aug 2017	1	1,806K	Y		
5.3) Heat and Vacuum System, X-51		2015	TBD ⁽³⁾ / TBD	C / FP	NAVSUP FLC YOKOSUKA	Mar 2016	Mar 2017	1	500,000.00	N	Jan 2015	
5.4) Environmental Welding Chamber		2016	TBD ⁽⁴⁾ / TBD	C / TBD	NAVSUP FLC Puget	May 2017	May 2018	1	300,000.00	N	Mar 2016	May 2016
5.5) Burning Oven		2016	TBD ⁽⁵⁾ / TBD	C / TBD	NAVSUP FLC YOKOSUKA	Sep 2016	Sep 2017	1	700,000.00	N	Mar 2016	Mar 2016
5.6) CNC Plasma Cutting Machine		2015	TBD ⁽⁶⁾ / TBD	C / TBD	DLA	Sep 2016	Sep 2017	1	1,243K	Y		
5.6) CNC Plasma Cutting Machine		2016	TBD ⁽⁶⁾ / TBD	C / TBD	DLA	Sep 2017	Sep 2018	1	415,000.00	N	Feb 2016	
5.7) LOX/LIN Provider		2016 ⁽⁷⁾	TBD ⁽⁸⁾ / TBD	C / TBD	NAVFAC FE	Sep 2016	Sep 2017	2	700,000.00	N	Jun 2016	Jun 2016
5.8) CNC Lathe		2016	TBD ⁽⁹⁾ / TBD	C / TBD	DLA	Jul 2016	Jul 2017	1	900,000.00	N	Apr 2016	Apr 2016
5.9) Boring, Drilling and Milling (BDM) Machine		2016	TBD ⁽¹⁰⁾ / TBD	C / TBD	DLA	Mar 2017	Aug 2017	1	2,233K	N	Apr 2016	
5.10) Metal Gear Shaper		2016	TBD ⁽¹¹⁾ / TBD	C / TBD	DLA	Jun 2016	Jun 2017	1	400,000.00	N	Mar 2016	Mar 2016
5.11) Parts Cleaning Machine		2016	TBD ⁽¹²⁾ / TBD	C / TBD	NAVSUP FLC YOKOSUKA	Sep 2016	Sep 2016	1	700,000.00	N	May 2016	Jul 2016
5.12) Propeller Shaft Lathe ^(†)		2017	TBD ⁽¹³⁾ / TBD	C / FP	DLA	May 2017	May 2019	1	5,834K	N	May 2016	
5.13) Optical Emission Mass (OEM) Spectrometer		2017	TBD ⁽¹⁴⁾ / TBD	C / FP	DLA	May 2017	May 2018	1	300,000.00	N	May 2016	

^(†) indicates the presence of a P-21

Footnotes:

- ⁽²⁾ Manufacturer to be determined upon contract award.
- ⁽³⁾ Manufacturer to be determined upon contract award.
- ⁽⁴⁾ Manufacturer to be determined upon contract award.
- ⁽⁵⁾ Manufacturer to be determined upon contract award.
- ⁽⁶⁾ Manufacturer to be determined upon contract award.
- ⁽⁷⁾ Manufacturer to be determined after contract award.
- ⁽⁸⁾ Manufacturer to be determined upon contract award.
- ⁽⁹⁾ Manufacturer to be determined upon contract award.
- ⁽¹⁰⁾ Manufacturer to be determined upon contract award.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	P-1 Line Item Number / Title: 1445 / Operating Forces IPE	Aggregated Items: Operating Forces IPE
<p>⁽¹¹⁾ Manufacturer to be determined upon contract award.</p> <p>⁽¹²⁾ Manufacturer TBD following contract award.</p> <p>⁽¹³⁾ Manufacturer TBD once contract is awarded.</p> <p>⁽¹⁴⁾ Manufacturer TBD once contract is awarded.</p>		

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14 **P-1 Line Item Number / Title:** 1445 / Operating Forces IPE **Aggregated Items:** Operating Forces IPE

Items <i>(Units in Each)</i>						Fiscal Year 2015												Fiscal Year 2016												BALANCE	
O C C #	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
5) KN504: Commander, U.S. Pacific Fleet (PACFLT)																															
5.12) Propeller Shaft Lathe																															
20		2017	NAVY	1	-	1																							1		
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14 **P-1 Line Item Number / Title:** 1445 / Operating Forces IPE **Aggregated Items:** Operating Forces IPE

Items <i>(Units in Each)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE	
O C C #	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
5) KN504: Commander, U.S. Pacific Fleet (PACFLT)																															
5.12) Propeller Shaft Lathe																															
20		2017	NAVY	1	-	1																							1		
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	P-1 Line Item Number / Title: 1445 / Operating Forces IPE	Aggregated Items: Operating Forces IPE
--	---	--

Items <small>(Units in Each)</small>						Fiscal Year 2019											Fiscal Year 2020											BALANCE	
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

5) KN504: Commander, U.S. Pacific Fleet (PACFLT)

5.12) Propeller Shaft Lathe

20	2017	NAVY		1	-	1	-	-	-	-	-	-	-	1																		
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 14	P-1 Line Item Number / Title: 1445 / Operating Forces IPE	Aggregated Items: Operating Forces IPE
--	---	--

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	TBD ⁽¹³⁾ - TBD	-	-	-	-	-	-	-	-	-	12	24	36

"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).

Footnotes:
⁽¹³⁾ Manufacturer TBD once contract is awarded.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1480 / Nuclear Alterations
--	--

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	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	508.454	118.129	132.625	172.718	-	172.718	173.578	102.701	90.773	75.051	-	1,374.029
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	508.454	118.129	132.625	172.718	-	172.718	173.578	102.701	90.773	75.051	-	1,374.029
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	508.454	118.129	132.625	172.718	-	172.718	173.578	102.701	90.773	75.051	-	1,374.029

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The details of this program are classified CONFIDENTIAL and are submitted to Congress annually in the classified budget justification books.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15:
Other Ship Support **P-1 Line Item Number / Title:**
1480 / Nuclear Alterations

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 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	Nuclear Alterations			- / 508.454	- / 118.129	- / 132.625	- / 172.718	- / -	- / 172.718
P-40	Total Gross/Weapon System Cost			- / 508.454	- / 118.129	- / 132.625	- / 172.718	- / -	- / 172.718

*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 details of this program are classified CONFIDENTIAL and are submitted to Congress annually in the classified budget justification books.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1480 / Nuclear Alterations **Aggregated Items Title:** Nuclear Alterations

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) New P40A Grouping																				
1.1) Nuclear Alterations	A		-	-	508.454	-	-	118.129	-	-	132.625	-	-	172.718	-	-	-	-	-	172.718
Subtotal: 1) New P40A Grouping			-	-	508.454	-	-	118.129	-	-	132.625	-	-	172.718	-	-	-	-	-	172.718
Total			-	-	508.454	-	-	118.129	-	-	132.625	-	-	172.718	-	-	-	-	-	172.718

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

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment
--	---

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

Line Item MDAP/MAIS Code: 374	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	350.049	30.938	23.061	27.840	-	27.840	39.682	23.387	16.504	22.384	718.179	1,252.024
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	350.049	30.938	23.061	27.840	-	27.840	39.682	23.387	16.504	22.384	718.179	1,252.024
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	350.049	30.938	23.061	27.840	-	27.840	39.682	23.387	16.504	22.384	718.179	1,252.024

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	1.289	2.173	0.061	-	0.061	0.080	0.057	0.051	0.029	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2017 funding request was reduced by \$8.350 million to account for the availability of prior years execution balance.

Littoral Combat Ship (LCS) focused mission packages provide the operational commander with capabilities to perform littoral mine countermeasures (MCM) operations, a detect-to-engage capability to counter small boat threats, and a detect-to-engage capability to counter enemy submarines. A mission package (MP) is a combination of warfare mission modules (MM) with specialized crew, support equipment, and vehicles, including embarked manned helicopters and unmanned aircraft and maritime systems. Mission Modules are packaged in a modular fashion so that they can be quickly swapped in and out pier side on any LCS platform. The program has an inventory objective of 24 MCM mission packages, 24 surface warfare (SUW) mission packages, and 16 anti-submarine warfare (ASW) mission packages. Mission package procurement and delivery are aligned with the ship delivery schedule, mission area demand signal from the combatant commanders, and the retirement of legacy platforms. This means that 64 interchangeable mission packages will be available for use among the two seaframe variants of the LCS class to support global warfighting and peacetime presence requirements.

The LCS MMs program has developed two principal Seaframe-installed components to facilitate MP operation, the Mission Package Computing Environment (MPCE) and the Data Mission Payload. Additionally, each MP uses tailored Support Containers (SCs) whose designs are based upon an International Organization for Standardization (ISO) compliant base container. The initial SUW, MCM, and ASW MPs utilize the common equipment, infrastructure, and services to the maximum extent possible. Future MMs and MPs will utilize the common infrastructure and services as well. The base container is built to print with adjustable interior rails that can be reconfigured for a variety of applications. The containers are built to a lightweight design and specialized to accommodate particular mission systems with maximum efficiency.

The Common Mission Modules Equipment (Line Item Number 1600) by itself or support containers by themselves do not comprise a Mission Package and are only deployable when part of a complete Mission Package. A Mission Package is deployable and capable of meeting its focused mission requirements on an LCS only when it includes the full complement of Common Mission Modules Equipment combined with all the mission systems that comprise the LCS MCM Mission Module (Line Item Number 1601), or combined with all the mission systems that comprise the LCS ASW Mission Module (Line Item Number 1602), or combined with all the mission systems that comprise the LCS SUW Mission Module (Line Item Number 1603). Additionally, the LCS MCM Mission Package also requires all the mission systems included in the Remote Minehunting System (RMS) (Line Item Number 1605).

Other Related Budgets: BLIs: OPN 1601, OPN 1602, OPN 1603, OPN 1605, OPN 4248, OPN 2622, OPN 2624, WPN 4221, WPN 4225, RDT&E 0603596N

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support		P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 374	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / LM005 - OBSOLESCENCE MISSION MODULE ECPs]: Supports Engineering Change Proposals (ECPs) for the obsolete systems in the MCM and SUW mission packages. ECPs are required to add the RT-1944/U Multiband Radio to LCS 1-2 and to replace existing radios (which have been de-certified for operational use) in the MCM mission package including all Remote Multi-Mission Vehicle (RMMV) and Unmanned Surface Vehicles (USVs). ECPs are required to retrofit MCM Mission Package #1 RMMV (two vehicles) to the Multiple Vehicle Communications System (MVCS) common communications system.</p> <p>[P40A / LM006 - LCS MISSION MODULES RADIO]: Communications terminal equipment to provide communications capability for LCS Mission Modules from off-board vehicles to the seaframe. Includes installation and checkout on-board the seaframe.</p> <p>[P40A / LM007 - C-HAWKLINK SUPPORT EQUIPMENT]: The C-Hawklink Support Equipment consists of a C-Band to Ku-Band radio conversion equipment set to enable the SH-60B and MH-60R helicopters interoperability with LCS Seaframe and Mission Modules via the Ku-Band Tactical Control Data Link.</p> <p>[P40A / LM008 - MPCE]: Commercial Off The Shelf (COTS)- Based Common Computing environment will support legacy Mission Package (MP) Command & Control (C2) applications and transition to Modular Open Systems Approach (MOSA) & Navy Open Architecture Computing Environment (OACE). It also provides a common computing environment to support the execution of Mission Package Application Software (MPAS), the shipboard tactical software associated with each mission package that enables execution of its focused mission. Includes installation and checkout on-board the seaframe.</p> <p>[P40A / LM009 - DATA MISSION PAYLOAD]: Provides the capability to extend the communications range of the LCS mission module vehicles over the horizon. It provides the LCS mission modules and seaframe with a network-centric capability that may be installed on air and surface vehicles supporting multiple sensors operating in the maritime environment.</p> <p>[P40A / LM010 - MISSION PACKAGE INTEGRATION]: The system engineering partner from industry is responsible for assembling each mission package, via the consolidation of the requisite modules, and ensuring that all integration and interface requirements are met.</p> <p>[P40A / LM012 - TRAINING EQUIPMENT]: Procurement of training systems for the LCS Mission Module detachment training at the San Diego LCS Training Facility (LTF), future LTF sites and other formal training locations.</p> <p>Systems include:</p> <p>Common Mission Package Trainer (CMPT) tactical team trainer Technical Training Equipment (TTE) consisting of:</p> <p>MPCE tactical processing hardware capable of hosting tactical Mission Package Application Software (MPAS) with scenario generator, visualization and SIM/STIM capable of integrating with ship type Combat Management System trainers and Navy Cooperative Training Environment to perform Joint Synthetic Training;</p> <p>Mission Package Training System (MPTS) Part Task Trainer (PTT) Training Device (TD) consisting of COTS hardware and emulation of tactical environment for training specific watch station tasks (MCM: Remote Minehunting System (RMS) Operator and RMS Sensor Operator; SUW: Gun Console Operator; ASW: TBD) in preparation for training in team environment using CMPT;</p> <p>MK-50 Gun Weapon System (GWS) TTE consisting of elements necessary to make the MK-46 GWS integrate into LCS weapons zones;</p> <p>Post Mission Analysis TD consisting of COTS hardware hosting Post Mission Analysis (PMA), PMA scenario, and Learning Management System (LMS) software capable of initial training and proficiency training for off hull Sailors; and the Mission Bay Trainer, which includes various elements of Mission Package hardware found in Mission Bay and Weapons zones to train in individual skills and team skills with larger LCS team in the LTF Mission Bay Trainer. These elements include Support Container TTE, RMS PTT TD, AQS-20 PTT TD, Airborne Laser Mines Detection System (ALMDS) PTT TD, Airborne Mine Neutralization System (AMNS) AMNS PTT TD, Unmanned Influence Sweep System (UISS) PTT TD, KNIFEFISH PTT TD, MHE TTE, MK50 GWS PTT TTE, MK50 GWS PTT TD, 11M RHIB Cradle, 11M RHIB PTT, EMIO equipment, and ASW EMM PTT. This equipment provides the training platform to train Mission Package sailors in individual and team skills associated with mission planning, execution and post mission analysis necessary to achieve the Train to Certify (T2C) Key Performance Parameter (KPP).</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support		P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 374	Item MDAP/MAIS Code(s): N/A	
<p>[P40A / MISSION BAY TRAINING DEVICES - MCM]: FY17 Procurement includes the following: one set MCM Mission Bay Trainer items for Mayport that include: RMMV(1), AQS-20(2), and AMNS (1) Part Task Trainers; RMMV Cradle (1), RMS Capture Spine (1), MHU-235(2) and MHU 191(1)Mechanical Handling Equipment, and cable rewind machine Technical Training Equipment; and RMS (1), AQS-20 (1), AMNS/ALMDS (1), and 10' (1) Support Containers, and container outfitting Technical Training Equipment. FY18 Procurement includes the following: Knifefish and UISS "module" Technical Training Equipment as well as San Diego EMM Launch and Recovery Systems and IVSE.</p> <p>[P40A / LM015 - CONTAINERS (SHIPPING & SUPPORT)]: Each MP variant uses a base Support Container (SC) which is an ISO compliant shipping container, and comes in two variants: Type I and Type II. The Type I container is a 20-foot ISO container with nominal dimensions of 20' x 8' x 8'. The Type II container is a 10-foot ISO container with nominal dimensions of 10' x 8' x 8'. In both cases the base SC is constructed of high strength steel to reduce the overall weight and features a number of standard configuration items. Mission systems fit inside standard ten- or twenty-foot ISO SCs, or on ISO compliant flat racks and vehicle cradles. The LCS MP zones inside each seaframe mission bay are configured to accommodate the SCs.</p> <p>[P40A / MCM SUPPORT CONTAINER]: Unit price for the MCM Containers is an average cost that does not reflect the cost of each container. Individual containers for each of the different MCM mission systems have unique requirements and vary in cost.</p> <p>[P40A / LM016 - MVCS]: The Multiple Vehicle Communications System (MVCS) provides the Littoral Combat Ship (LCS) Mission Modules with the capability to simultaneously communicate with multiple Unmanned Surface Vehicles (USVs) and surfaced Unmanned Underwater Vehicles (UUVs) by providing common data link and network communication services. These services include link establishment, link management, communications fail-safes, Emissions Control (EMCON) handling, data routing and protection, packet shaping, Priority of Service (PoS), and automated communications system configuration. MVCS establishes a common interface for these services in the form of hardware and message definitions to maximize the usefulness of limited radio equipment onboard the LCS seaframe.</p> <p>[P40A / LM900 - CONSULTING SERVICES]: Provides program management support, engineering and technical support, studies, analysis and evaluation on mission package systems.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15:
 Other Ship Support **P-1 Line Item Number / Title:**
 1600 / LCS Common Mission Modules Equipment

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

Line Item MDAP/MAIS Code: 374 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	LCS MISSION MODULES	P-5a, P-21		- / 350.049	- / 30.938	- / 23.061	- / 27.840	- / -	- / 27.840
P-40	Total Gross/Weapon System Cost			- / 350.049	- / 30.938	- / 23.061	- / 27.840	- / -	- / 27.840

*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.

--

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy																Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15						P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment						Aggregated Items Title: LCS MISSION MODULES								
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) LM001 - MCM Mission Package																				
1.1) USV	A		-	-	1.675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) USV - SWEEP	A		-	-	2.410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4) RMMV	A		-	-	15.571	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5) RMMV CRADLE ^(†)	A		7,604K	2	15.208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.7) AMNS	A		7,595K	1	7.595	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.8) ALMDS ^(†)	A		19,867K	1	19.867	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.9) AN/AQS-20A	A		-	-	39.099	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.10) COBRA	A		-	-	7.792	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.12) MCM SUPPORT CONTAINERS ^(†)	A		1,510K	15	22.654	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.13) SUPPORT EQUIPMENT	A		-	-	11.064	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.14) PRODUCTION ENGINEERING SUPPORT	A		-	-	8.360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.15) MCM INCREMENTAL WHOLENESS - AQS-20A	A		-	-	5.773	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) LM001 - MCM Mission Package			-	-	157.068	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2) LM002 - ASW MISSION PACKAGE																				
2.1) ASW MISSION PACKAGE	A		-	-	17.498	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) LM002 - ASW MISSION PACKAGE			-	-	17.498	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3) LM003 - SUW MISSION PACKAGE																				
3.1) GUN MODULE ^(†)	A		12,618K	2	25.237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) SUW SHIPPING CONTAINER ^(†)	A		144,833.33	6	0.869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.3) SUW SUPPORT CONTAINER ^(†)	A		980,250.00	4	3.921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.4) SURFACE-TO-SURFACE MISSILE MODULE	A		-	-	2.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.5) PRODUCTION ENGINEERING	A		-	-	2.013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) LM003 - SUW MISSION PACKAGE			-	-	34.440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy																Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15						P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment						Aggregated Items Title: LCS MISSION MODULES								
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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) LM005 - OBSOLESCENCE MISSION MODULE ECPs																				
4.1) ENGINEERING CHANGE PROPOSALS	A		-	-	21.907	-	-	1.200	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) LM005 - OBSOLESCENCE MISSION MODULE ECPs			-	-	21.907	-	-	1.200	-	-	-	-	-	-	-	-	-	-	-	-
5) LM006 - LCS MISSION MODULES RADIO																				
5.1) LCS MISSION MODULES RADIO ^(†)	A		1,540K	8	12.316	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.2) PRODUCTION ENGINEERING	A		-	-	1.436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) LM006 - LCS MISSION MODULES RADIO			-	-	13.752	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6) LM007 - C-HAWKLINK SUPPORT EQUIPMENT																				
6.1) C-HAWKLINK SUPPORT EQUIPMENT	A		-	-	5.885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 6) LM007 - C-HAWKLINK SUPPORT EQUIPMENT			-	-	5.885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7) LM008 - MPCE																				
7.1) MPCE ^(†)	A		845,800.00	10	8.458	779,000.00	4	3.116	793,000.00	4	3.172	810,000.00	2	1.620	-	-	-	810,000.00	2	1.620
7.2) MPCE Replacement/Attrition/Tech Refresh ^(†)	A		-	-	-	726,333.33	3	2.179	-	-	-	-	-	-	-	-	-	-	-	-
7.3) PRODUCTION ENGINEERING	A		-	-	0.580	-	-	0.292	-	-	0.228	-	-	0.240	-	-	-	-	-	0.240
Subtotal: 7) LM008 - MPCE			-	-	9.038	-	-	5.587	-	-	3.400	-	-	1.860	-	-	-	-	-	1.860
8) LM009 - DATA MISSION PAYLOAD																				
8.1) DATA MISSION PAYLOAD ^(†)	A		5,391K	2	10.782	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.2) PRODUCTION ENGINEERING	A		-	-	1.638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 8) LM009 - DATA MISSION PAYLOAD			-	-	12.420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9) LM010 - MISSION PACKAGE INTEGRATION																				
9.1) MISSION PACKAGE PRODUCTION ENGINEERING & ASSEMBLY	A		-	-	4.523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 9) LM010 - MISSION PACKAGE INTEGRATION			-	-	4.523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10) LM012 - TRAINING EQUIPMENT																				

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment **Aggregated Items Title:** LCS MISSION MODULES

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
10.1) COMMON MISSION PACKAGE TRAINER (CMPT) ^(†)	A		-	-	3.490	2,520K	1	2.520	2,571K	1	2.571	2,622K	1	2.622	-	-	-	2,622K	1	2.622
10.2) Mission Package Training Equipment Tech Refresh	A		-	-	-	-	-	0.823	-	-	1.714	-	-	2.052	-	-	-	-	-	2.052
10.3) MISSION PACKAGE TRAINING SYSTEM (MPTS)	A		-	-	0.450	-	-	0.543	-	-	-	-	-	-	-	-	-	-	-	-
10.4) MK-50 GUN WEAPON SYSTEM TTE ^(†)	A		-	-	2.849	3,510K	1	3.510	3,602K	1	3.602	-	-	-	-	-	-	-	-	-
10.5) MISSION BAY TRAINING DEVICES - MCM	A		-	-	12.304	-	-	1.673	-	-	-	-	-	12.170	-	-	-	-	-	12.170
10.7) MISSION BAY TRAINING DEVICES - SUW	A		-	-	-	-	-	-	-	-	-	-	-	0.250	-	-	-	-	-	0.250
Subtotal: 10) LM012 - TRAINING EQUIPMENT			-	-	19.093	-	-	9.069	-	-	7.887	-	-	17.094	-	-	-	-	-	17.094
11) LM013 - MARITIME SECURITY MODULE																				
11.1) MARITIME SECURITY MODULE ^(†)	A		3,850K	4	15.402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.2) PRODUCTION ENGINEERING	A		-	-	1.279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 11) LM013 - MARITIME SECURITY MODULE			-	-	16.681	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12) LM015 - CONTAINERS (SHIPPING & SUPPORT)																				
12.1) MCM SUPPORT CONTAINER ^(†)	A		1,268K	14	17.759	1,484K	7	10.385	-	-	-	1,662K	2	3.324	-	-	-	1,662K	2	3.324
12.2) SUW SUPPORT CONTAINER ^(†)	A		499,666.67	12	5.996	692,500.00	2	1.385	706,250.00	8	5.650	722,750.00	4	2.891	-	-	-	722,750.00	4	2.891
12.3) SUW SHIPPING CONTAINER ^(†)	A		147,250.00	12	1.767	-	-	-	210,500.00	12	2.526	-	-	-	-	-	-	-	-	-
12.4) PRODUCTION ENGINEERING	A		-	-	1.391	-	-	1.633	-	-	2.324	-	-	2.398	-	-	-	-	-	2.398
Subtotal: 12) LM015 - CONTAINERS (SHIPPING & SUPPORT)			-	-	26.913	-	-	13.403	-	-	10.500	-	-	8.613	-	-	-	-	-	8.613
13) LM016 - MVCS																				

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment **Aggregated Items Title:** LCS MISSION MODULES

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
13.1) MVCS Replacement/Attrition/Tech Refresh ^(†)	A		-	-	-	272,500.00	4	1.090	280,000.00	2	0.560	-	-	-	-	-	-	-	-	-
13.2) Production Engineering	A		-	-	-	-	-	0.066	-	-	0.027	-	-	-	-	-	-	-	-	-
Subtotal: 13) LM016 - MVCS			-	-	0.000	-	-	1.156	-	-	0.587	-	-	-	-	-	-	-	-	-
14) LM900 - CONSULTING SERVICES																				
14.1) CONSULTING SERVICES	A		-	-	10.831	-	-	0.523	-	-	0.687	-	-	0.273	-	-	-	-	-	0.273
Subtotal: 14) LM900 - CONSULTING SERVICES			-	-	10.831	-	-	0.523	-	-	0.687	-	-	0.273	-	-	-	-	-	0.273
Total			-	-	350.049	-	-	30.938	-	-	23.061	-	-	27.840	-	-	-	-	-	27.840

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15			P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment					Aggregated Items: LCS MISSION MODULES				
Item Number / Title [DODIC]	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) LM001 - MCM Mission Package												
1.5) RMMV CRADLE		2012	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Mar 2013	Sep 2014	2	3,891K	Y		
1.8) ALMDS		2011	Northrup Grumman / Melbourne, Florida	SS / FFP	NSWC/PC	Mar 2012	Sep 2013	1	7,100K	Y		
1.12) MCM SUPPORT CONTAINERS		2011	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	May 2012	Nov 2013	7	914,571.43	Y		Jun 2011
1.12) MCM SUPPORT CONTAINERS		2012	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Mar 2013	Sep 2014	8	988,875.00	Y		Feb 2012
3) LM003 - SUW MISSION PACKAGE												
3.1) GUN MODULE		2012	VARIOUS / VARIOUS	C / CPFF	NAVSEA	Mar 2013	Sep 2014	2	6,416K	Y		
3.2) SUW SHIPPING CONTAINER		2012	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Mar 2013	Sep 2014	6	144,833.33	Y		
3.3) SUW SUPPORT CONTAINER		2012	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Mar 2013	Sep 2014	4	403,250.00	Y		
5) LM006 - LCS MISSION MODULES RADIO												
5.1) LCS MISSION MODULES RADIO		2012	Harris Corporation / Melbourne, FL	C / CPFF	NSWC/PC	Apr 2014	Jan 2015	2	1,370K	Y		
5.1) LCS MISSION MODULES RADIO		2013	Harris Corporation / Melbourne, FL	C / CPFF	NSWC/PC	Apr 2014	Jan 2015	2	1,386K	Y		
5.1) LCS MISSION MODULES RADIO		2014	BAE Systems / Rockville, MD	C / CPFF	SSC PAC	Mar 2015	Dec 2015	2	1,403K	Y		
7) LM008 - MPCE												
7.1) MPCE		2012	Advanced Acoustic Concept / Columbia, MD	SS / CPFF	NAVSEA	Aug 2012	Aug 2013	2	800,500.00	Y		
7.1) MPCE		2013	Advanced Acoustic Concept / Columbia, MD	SS / CPFF	NAVSEA	Mar 2013	Mar 2014	4	779,500.00	Y		
7.1) MPCE		2014	Advanced Acoustic Concept / Columbia, MD	SS / CPFF	NAVSEA	May 2014	May 2015	4	766,000.00	Y		
7.1) MPCE		2015	Advanced Acoustic Concept / Columbia, MD	SS / CPFF	NAVSEA	Mar 2015	Mar 2016	4	779,000.00	Y		
7.1) MPCE		2016	Advanced Acoustic Concept / Columbia, MD	SS / CPFF	NAVSEA	Mar 2016	Mar 2017	4	793,000.00	Y		
7.1) MPCE		2017	TBD / TBD	C / FFP	NAVSEA	Mar 2017	Mar 2018	2	810,000.00	N		
7.2) MPCE Replacement/Attrition/ Tech Refresh		2015	Advanced Acoustic Concept / Columbia, MD	SS / CPFF	NAVSEA	Jan 2015	Jan 2016	3	726,333.33	Y		
8) LM009 - DATA MISSION PAYLOAD												
8.1) DATA MISSION PAYLOAD ^(†)		2011	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Aug 2012	Aug 2013	1	5,214K	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy								Date: February 2016				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15			P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment					Aggregated Items: LCS MISSION MODULES				
Item Number / Title [DODIC]	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
8.1) DATA MISSION PAYLOAD ^(†)		2014	Redstone Defense / Huntsville, AL	C / FFP	NSWC PC	Aug 2014	Aug 2015	1	5,568K	Y		Mar 2013
10) LM012 - TRAINING EQUIPMENT												
10.1) COMMON MISSION PACKAGE TRAINER (CMPT)		2015	Advanced Acoustic Concept / Columbia, MD	SS / FP	NAVSEA	Mar 2015	Mar 2016	1	2,520K	Y		
10.1) COMMON MISSION PACKAGE TRAINER (CMPT)		2016	Advanced Acoustic Concept / Columbia, MD	SS / FP	NAVSEA	Mar 2016	Mar 2017	1	2,571K	Y		
10.4) MK-50 GUN WEAPON SYSTEM TTE		2015	General Dynamics / Falls Church, VA	C / FP	NAVSEA	Sep 2015	Sep 2016	1	3,510K	Y		
10.4) MK-50 GUN WEAPON SYSTEM TTE		2016	General Dynamics / Falls Church, VA	C / FP	NAVSEA	Mar 2016	Mar 2017	1	3,602K	Y		
11) LM013 - MARITIME SECURITY MODULE												
11.1) MARITIME SECURITY MODULE		2011	VARIOUS / VARIOUS	C / CPFF	NAVSEA	Jun 2012	Jun 2013	1	2,500K	Y		
11.1) MARITIME SECURITY MODULE		2012	VARIOUS / VARIOUS	C / CPFF	NAVSEA	May 2013	May 2014	3	2,500K	Y		
12) LM015 - CONTAINERS (SHIPPING & SUPPORT)												
12.1) MCM SUPPORT CONTAINER ^(†)		2013	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Jun 2013	Dec 2014	7	1,082K	Y		
12.1) MCM SUPPORT CONTAINER ^(†)		2014	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Dec 2014	Jun 2016	7	1,455K	Y		Mar 2013
12.1) MCM SUPPORT CONTAINER ^(†)		2015	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Feb 2016	Aug 2017	7	1,484K	Y		
12.1) MCM SUPPORT CONTAINER ^(†)		2017 ⁽¹⁾	TBD / TBD	C / FFP	NAVSEA	Mar 2017	Sep 2018	2	1,662K	N		
12.2) SUW SUPPORT CONTAINER		2013	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Jun 2013	Dec 2014	8	410,250.00	Y		
12.2) SUW SUPPORT CONTAINER		2014	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Sep 2014	Mar 2016	4	678,500.00	Y		Mar 2013
12.2) SUW SUPPORT CONTAINER		2015	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Aug 2015	Feb 2017	2	692,500.00	Y		
12.2) SUW SUPPORT CONTAINER		2016	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Jun 2016	Dec 2017	8	706,250.00	Y		
12.2) SUW SUPPORT CONTAINER		2017	TBD / TBD	C / FFP	NAVSEA	Mar 2017	Sep 2018	4	722,750.00	N		
12.3) SUW SHIPPING CONTAINER		2013	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Jun 2013	Dec 2014	12	147,250.00	Y		
12.3) SUW SHIPPING CONTAINER		2016	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Jun 2016	Dec 2017	12	210,500.00	Y		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment	Aggregated Items: LCS MISSION MODULES
--	---	---

Item Number / Title [DODIC]	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
13) LM016 - MVCS												
13.1) MVCS Replacement/Attrition/ Tech Refresh		2015	VARIOUS / VARIOUS	C / CPFF	NSWC/PC	Mar 2015	Mar 2016	4	272,500.00	Y		
13.1) MVCS Replacement/Attrition/ Tech Refresh		2016	VARIOUS / VARIOUS	C / CPFF	NSWC PC	Mar 2016	Mar 2017	2	280,000.00	N		

^(t) indicates the presence of a P-21

Footnotes:

⁽¹⁾ Unit price for the MCM Containers is an average cost that does not reflect the cost of each container. Individual containers for each of the different MCM mission systems have unique requirements and vary in cost.

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment **Aggregated Items:** LCS MISSION MODULES

Items <i>(Units in Each)</i>						Fiscal Year 2012												Fiscal Year 2013												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2011	BAL DUE AS OF 1 OCT	Calendar Year 2012												Calendar Year 2013												
							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
8) LM009 - DATA MISSION PAYLOAD																															
8.1) DATA MISSION PAYLOAD																															
21		2011	NAVY	1	-	1																									
22		2014	NAVY	1	-	1																									
12) LM015 - CONTAINERS (SHIPPING & SUPPORT)																															
12.1) MCM SUPPORT CONTAINER																															
23		2013	NAVY	7	-	7																									
23		2014	NAVY	7	-	7																									
23		2015	NAVY	7	-	7																									
24		2017	NAVY	2	-	2																									
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment **Aggregated Items:** LCS MISSION MODULES

Items <i>(Units in Each)</i>					Fiscal Year 2014												Fiscal Year 2015												BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014												Calendar Year 2015												
							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
8) LM009 - DATA MISSION PAYLOAD																															
8.1) DATA MISSION PAYLOAD																															
	21	2011	NAVY	1	1	-																							-		
	22	2014	NAVY	1	-	1																							-		
12) LM015 - CONTAINERS (SHIPPING & SUPPORT)																															
12.1) MCM SUPPORT CONTAINER																															
	23	2013	NAVY	7	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	23	2014	NAVY	7	-	7																							7		
	23	2015	NAVY	7	-	7																							7		
	24	2017	NAVY	2	-	2																							2		
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment **Aggregated Items:** LCS MISSION MODULES

Items <i>(Units in Each)</i>					Fiscal Year 2016													Fiscal Year 2017												BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016													Calendar Year 2017												
							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	
8) LM009 - DATA MISSION PAYLOAD																																
8.1) DATA MISSION PAYLOAD																																
21		2011	NAVY	1	1	-																							-			
22		2014	NAVY	1	1	-																							-			
12) LM015 - CONTAINERS (SHIPPING & SUPPORT)																																
12.1) MCM SUPPORT CONTAINER																																
23		2013	NAVY	7	7	-																							-			
23		2014	NAVY	7	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
23		2015	NAVY	7	-	7																							-			
24		2017	NAVY	2	-	2																							2			
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1600 / LCS Common Mission Modules Equipment **Aggregated Items:** LCS MISSION MODULES

Items <i>(Units in Each)</i>					Fiscal Year 2018												Fiscal Year 2019												BALANCE		
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
8) LM009 - DATA MISSION PAYLOAD																															
8.1) DATA MISSION PAYLOAD																															
	21	2011	NAVY	1	1	-																							-		
	22	2014	NAVY	1	1	-																							-		
12) LM015 - CONTAINERS (SHIPPING & SUPPORT)																															
12.1) MCM SUPPORT CONTAINER																															
	23	2013	NAVY	7	7	-																							-		
	23	2014	NAVY	7	7	-																							-		
	23	2015	NAVY	7	7	-																							-		
	24	2017	NAVY	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1600 / LCS Common Mission Modules Equipment	Aggregated Items: LCS MISSION MODULES
--	---	---

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	NORTHROP GRUMMAN - BETHPAGE, NEW YORK	1	4	8	3	3	12	15	3	3	12	15
2	Redstone Defense - Huntsville, AL	1	4	8	-	-	12	12	3	3	12	15
3	NORTHROP GRUMMAN - BETHPAGE, NEW YORK	1	7	20	3	3	18	21	3	3	18	21
4	TBD - TBD	1	7	20	3	3	18	21	3	3	18	21

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules
--	--

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603596N
---	--	--

Line Item MDAP/MAIS Code: 000	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	66.714	15.270	67.451	57.146	-	57.146	161.605	197.738	103.496	203.284	860.567	1,733.271
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	66.714	15.270	67.451	57.146	-	57.146	161.605	197.738	103.496	203.284	860.567	1,733.271
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	66.714	15.270	67.451	57.146	-	57.146	161.605	197.738	103.496	203.284	860.567	1,733.271

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	4.400	0.966	3.964	-	3.964	2.981	2.560	0.764	0.221	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The LCS Mine Countermeasures (MCM) mission package counters bottom, deep, shallow, surface, near surface, and tethered mines in the littoral without putting Sailors in the minefield. When the MCM mission package is embarked, LCS is capable of conducting detect-to-engage operations (hunting, sweeping, and neutralization) against shallow and deep-water sea mine threats. The MCM mission package provides these capabilities through the use of sensors and weapons deployed from an embarked MH-60S multi-mission helicopter and unmanned off-board vehicles. The embarked MH-60S employs the Organic Airborne Mine Countermeasures Module to provide rapid mine hunting and clearing using helicopter deployed systems. Future phases will add the Coastal Mine Reconnaissance Module (CMRM) to allow detection of minefield patterns and obstacles from an embarked Fire Scout Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle (VTUAV), a surface influence sweep capability for high-speed influence minesweeping, and the Surface Mine Countermeasures Unmanned Undersea Vehicle (SMCM/UUV) to detect buried mines. When complete, the MCM mission package will provide full capability against floating, tethered, bottom, and buried mines. Two MCM mission packages (RDTE prior years) have been delivered and a third (OPN prior year) is in production.

The MCM Mission Package is deployable and capable of meeting its focused mission requirements on an LCS only when it includes the full complement of Common Mission Modules Equipment (Line Item Number 1600) and the full complement of mission systems that comprise the LCS MCM Mission Module (Line Item Number 1601) and Remote Mine hunting Systems (RMS) (Line Item Number 1605). If mission systems are removed in any given Fiscal Year, the MCM Mission Package will be non-deployable until the mission systems are replaced in a subsequent Fiscal Year.

LCS deployments are based on a 3:2:1 operational model. This means 3 crews will rotate between 2 ships/mission packages with 1 ship and mission package continuously deployed. The three crews will rotate on a fixed interval between being deployed on the forward deployed (OCONUS) LCS, training onboard the CONUS-based LCS, and conducting basic training and certifications while off-hull at the LCS Squadron and Littoral Training Facility. Mission Module crews will follow a similar rotation on the same interval. Therefore, of the total number of LCS with MCM Mission Package embarked, half will be deployed continuously and half will operate from the CONUS homeport LCS conducting work-ups for the upcoming interval on a forward deployed LCS.

The number of LCS mission packages must not only keep pace with the number of ships, more are required to account for the mission packages that will be forward staged or unavailable due to periodic maintenance requirements.

Other Related Budgets: BLIs: OPN 1600, OPN 1602, OPN 1603, OPN 1605, OPN 4248, OPN 2622, OPN 2624, WPN 4221, WPN 4225, RDT&E 0603596N

Prior to FY13, MCM mission module systems were funded under OPN BLI 1600. Beginning in FY15, Remote Minehunting System (RMS) is funded under OPN BLI 1605.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support		P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603596N
Line Item MDAP/MAIS Code: 000	Item MDAP/MAIS Code(s): N/A	
<p>The MCM package consists of the following systems: Coastal Battlefield Reconnaissance & Analysis (COBRA), Airborne Laser Mine Detection System (ALMDS), Remote Multi-Mission Vehicle (RMMV), AQS-20A Minehunting Sonar, Airborne Mine Neutralization System (AMNS), Unmanned Surface Vehicle (USV) with Unmanned Surface Sweep System (USSS), Surface Mine Countermeasures (SMCM) Unmanned Undersea Vehicle (UUV) with Low Frequency Broad Band (LFBB) and Support Containers. The individual systems are combined into five modules: Influence Mine Sweep Module, Remote Mine Hunting Module (described in BLI OPN 1605), Organic Airborne Mine Countermeasures (OAMCM) Module, Coastal Mine Reconnaissance Module, and Unmanned Undersea Module.</p> <p>[P5 / MC001 - INFLUENCE MINE SWEEP]: The Influence Mine Sweep Module provides an unmanned surface, long endurance bottom sweep capability to clear large areas of mines that may remain after mine-hunting operations are complete.</p> <p>[P5 / MC003 - ORGANIC AIRBORNE MINE COUNTERMEASURES (OAMCM)]: The OAMCM Module provides the long-range, airborne capability to conduct mine hunting and clearing operations in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA) quickly.</p> <p>[P5 / MC004 - COASTAL MINE RECONNAISSANCE MODULE]: The Coastal Mine Reconnaissance Module will detect mines in the surface zone and beach zone areas, providing the Joint Force Commander with the information needed to clear mines with non-LCS assets and allow military forces to safely and effectively storm the beaches.</p> <p>[P5 / MC005 - UNMANNED UNDERSEA MODULE]: The Unmanned Undersea Module provides capability to detect and identify buried mines and mines in a cluttered ocean bottom environment.</p> <p>[P5 / MC006 - MCM SUPPORT EQUIPMENT]: Support equipment related to the individual modules.</p> <p>[P5 / MC007 - MCM WHOLENESS SYSTEMS]: MCM Incremental Wholeness procures the individual mission systems required to bring previously acquired mission packages up to the incremental acquisition baseline.</p> <p>[P5 / MC008 - C-USV]: The Unmanned Surface Vehicle (USV) is integrated with the AQS-20 minehunting sonar. It provides minehunting capability from the USV for LCS MCM Mission Packages.</p> <p>[P5 / MC900 - CONSULTING SERVICES]: Provides program management support, engineering and technical support, studies, analysis and evaluation on mission module systems.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules
--	--

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603596N
--	---	---

Line Item MDAP/MAIS Code: 000	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / LCS MCM Mission Packages	P-5a, P-21		- / 66.714	- / 15.270	- / 67.451	- / 57.146	- / -	- / 57.146
P-40	Total Gross/Weapon System Cost			- / 66.714	- / 15.270	- / 67.451	- / 57.146	- / -	- / 57.146

*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.

--

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
--	--	---

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

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	66.714	15.270	67.451	57.146	-	57.146
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	66.714	15.270	67.451	57.146	-	57.146
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	66.714	15.270	67.451	57.146	-	57.146

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	4.400	0.966	3.964	-	3.964
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - MC001 - INFLUENCE MINE SWEEP Cost																		
Recurring Cost																		
1.1.1) Unmanned Influenced Sweep System ^(†)	-	-	-	-	-	-	-	-	-	11,800K	1	11.800	-	-	-	11,800K	1	11.800
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	11.800	-	-	-	-	-	11.800
<i>Subtotal: Hardware - MC001 - INFLUENCE MINE SWEEP Cost</i>	-	-	-	-	-	-	-	-	-	-	-	11.800	-	-	-	-	-	11.800
Hardware - MC003 - ORGANIC AIRBORNE MINE COUNTERMEASURES (OAMCM) Cost																		
Recurring Cost																		
2.1.1) AMNS ^(†)	2,741K	1	2.741	-	-	-	3,112K	2	6.223	-	-	-	-	-	-	-	-	-
2.1.2) ALMDS ^{(†) (1)}	6,765K	1	6.765	-	-	-	8,836K	2	17.673	13,826K	1	13.826	-	-	-	13,826K	1	13.826
2.1.3) AN/AQS-20A ^{(†) (2)}	9,420K	2	18.840	-	-	-	5,406K	6	32.434	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	28.346	-	-	-	-	-	56.330	-	-	13.826	-	-	-	-	-	13.826
<i>Subtotal: Hardware - MC003 - ORGANIC AIRBORNE MINE COUNTERMEASURES (OAMCM) Cost</i>	-	-	28.346	-	-	-	-	-	56.330	-	-	13.826	-	-	-	-	-	13.826
Hardware - MC004 - COASTAL MINE RECONNAISSANCE MODULE Cost																		
Recurring Cost																		
3.1.1) COBRA ^{(†) (3)}	-	-	-	-	-	-	-	-	-	9,444K	1	9.444	-	-	-	9,444K	1	9.444

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages

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

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	9.444	-	-	-	-	-	9.444
<i>Subtotal: Hardware - MC004 - COASTAL MINE RECONNAISSANCE MODULE Cost</i>	-	-	-	-	-	-	-	-	-	-	-	9.444	-	-	-	-	-	9.444
Hardware - MC005 - UNMANNED UNDERSEA MODULE Cost																		
Recurring Cost																		
4.1.1) KNIFEFISH ^(†) (4)	-	-	-	-	-	-	-	-	-	10,800K	1	10.800	-	-	-	10,800K	1	10.800
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	10.800	-	-	-	-	-	10.800
<i>Subtotal: Hardware - MC005 - UNMANNED UNDERSEA MODULE Cost</i>	-	-	-	-	-	-	-	-	-	-	-	10.800	-	-	-	-	-	10.800
Hardware - MC006 - MCM SUPPORT EQUIPMENT Cost																		
Recurring Cost																		
5.1.1) SUPPORT EQUIPMENT ⁽⁵⁾	-	-	4.373	-	-	3.137	-	-	4.915	-	-	4.103	-	-	-	-	-	4.103
<i>Subtotal: Recurring Cost</i>	-	-	4.373	-	-	3.137	-	-	4.915	-	-	4.103	-	-	-	-	-	4.103
<i>Subtotal: Hardware - MC006 - MCM SUPPORT EQUIPMENT Cost</i>	-	-	4.373	-	-	3.137	-	-	4.915	-	-	4.103	-	-	-	-	-	4.103
Hardware - MC007 - MCM WHOLENESS SYSTEMS Cost																		
Recurring Cost																		
6.1.3) MCM INCREMENTAL WHOLENESS - AQS-20A ^(†)	8,689K	3	26.068	8,244K	1	8.244	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	26.068	-	-	8.244	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - MC007 - MCM WHOLENESS SYSTEMS Cost</i>	-	-	26.068	-	-	8.244	-	-	-	-	-	-	-	-	-	-	-	-
Support - MC900 - CONSULTING SERVICES Cost																		
8.1) CONSULTING SERVICES	-	-	1.105	-	-	0.763	-	-	1.746	-	-	1.881	-	-	-	-	-	1.881
<i>Subtotal: Support - MC900 - CONSULTING SERVICES Cost</i>	-	-	1.105	-	-	0.763	-	-	1.746	-	-	1.881	-	-	-	-	-	1.881
Support - PRODUCTION ENGINEERING Cost																		
9.1) MC001 - UNMANNED	-	-	-	-	-	-	-	-	-	-	-	0.500	-	-	-	-	-	0.500

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
INFLUENCE MINE SWEEP																		
9.2) MC003 - ORGANIC AIRBORNE MINE COUNTERMEASURES (OAMCM) ⁽⁶⁾	-	-	6.318	-	-	2.436	-	-	3.789	-	-	3.117	-	-	-	-	-	3.117
9.3) MC004 - COASTAL MINE RECONNAISSANCE MODULE	-	-	-	-	-	-	-	-	-	-	-	0.500	-	-	-	-	-	0.500
9.4) MC005 - UNMANNED UNDERSEA MODULE	-	-	-	-	-	-	-	-	-	-	-	0.500	-	-	-	-	-	0.500
9.5) MC006 - MCM SUPPORT EQUIPMENT	-	-	0.504	-	-	0.690	-	-	0.671	-	-	0.675	-	-	-	-	-	0.675
<i>Subtotal: Support - PRODUCTION ENGINEERING Cost</i>	-	-	6.822	-	-	3.126	-	-	4.460	-	-	5.292	-	-	-	-	-	5.292
Gross/Weapon System Cost	-	-	66.714	-	-	15.270	-	-	67.451	-	-	57.146	-	-	-	-	-	57.146

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

Footnotes:

- (1) ALMDS unit prices are based on economic order quantity / step-ladder pricing in new contract award. FY14 quantity of 1 unit was combined with 4 units from BLI 4248 for unit price based on total quantity of 5 units. FY16 unit cost is based on quantity of 2 units. FY17 unit price based on 1 production unit. The FY17 ALMDS unit will be used in a previously procured MCM MP.
- (2) AQS-20 unit prices are based on economic order quantity / step-ladder pricing in new contract award. FY14 quantity of 2 units was combined with FY13 procurement and FY14 Incremental Wholeness units for unit price based on total quantity of 5 units. FY15 pricing for Incremental Wholeness based on quantity of 1 unit.
- (3) FY17 COBRA procurement is the first year of procurement. COBRA will be used in a previously procured MCM MP. After FY18, the program loses benefit of combined procurement of COBRA with funds in BLI 2624. Unit price will increase accordingly.
- (4) FY17 is the first year of production for Knifefish. Knifefish will be used in a previously procured MCM MP. In FY18, the quantity increases from 1 to 2 and gains benefit of economic order quantity. Increases over the inflation rate in the outyears reflect addition of increments to Knifefish hardware including increased endurance and improved sonar swath width.
- (5) FY17 funding is the first year of funding for UISS and KNIFEFISH and the additional equipment required to support those systems.
- (6) FY17 funding is the first year of funding for UISS and KNIFEFISH and the additional contract management required to support those systems.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
--	--	---

Cost Elements	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
1.1.1) Unmanned Influenced Sweep System ^(†)		2017	Textron / Hunt Valley, MD	C / FFP	NAVSEA	Feb 2017	Feb 2019	1	11,800K	N		
2.1.1) AMNS ^(†)		2013	Raytheon / Portsmouth, RI	SS / FFP	NAVSEA	Mar 2014	Aug 2015	1	2,741K	Y		May 2012
2.1.1) AMNS ^(†)		2016	TBD / TBD	C / FFP	NAVSEA	Jul 2016	Dec 2017	2	3,112K	Y		
2.1.2) ALMDS ^(†)		2014	Northrop Grumman / Melborn, FL	C / FFP	NAVSEA	Feb 2014	Aug 2015	1	6,765K	Y		
2.1.2) ALMDS ^(†)		2016	Northrop Grumman / Melborn, FL	C / FFP	NAVSEA	Feb 2016	Aug 2017	2	8,836K	Y		
2.1.2) ALMDS ^(†)		2017	Northrop Grumman / Melborn, FL	C / FFP	NAVSEA	Jan 2017	Jul 2018	1	13,826K	N		
2.1.3) AN/AQS-20A ^(†)		2013	Raytheon / Portsmouth, RI	C / FFP	NAVSEA	Feb 2014	Apr 2017	1	11,612K	Y		Jan 2012
2.1.3) AN/AQS-20A ^(†)		2014	Raytheon / Portsmouth, RI	C / FFP	NAVSEA	Feb 2014	May 2017	1	7,228K	Y		
2.1.3) AN/AQS-20A ^(†)		2016	Raytheon / Portsmouth, RI	C / FFP	NAVSEA	Mar 2016	Mar 2018	6	5,406K	Y		
3.1.1) COBRA ^(†)		2017	ARETE / TUCSON, AZ	C / FFP	NSWC PC	Mar 2017	Sep 2018	1	9,444K	N		
4.1.1) KNIFEFISH ^(†)		2017	General Dynamics MS / Mcleansville, NC	C / FFP	NAVSEA	Mar 2017	Jun 2018	1	10,800K	N		
6.1.3) MCM INCREMENTAL WHOLENESS - AQS-20A ^(†)		2013	Raytheon / Portsmouth, RI	C / FFP	NAVSEA	Feb 2014	May 2017	1	11,612K	Y		Jan 2012
6.1.3) MCM INCREMENTAL WHOLENESS - AQS-20A ^(†)		2014	Raytheon / Portsmouth, RI	C / FFP	NAVSEA	Aug 2014	May 2017	2	7,228K	Y		
6.1.3) MCM INCREMENTAL WHOLENESS - AQS-20A ^(†)		2015	Raytheon / Portsmouth, RI	C / FFP	NAVSEA	Nov 2014	Jun 2017	1	8,244K	Y		

^(†) indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
--	--	---

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2014													Fiscal Year 2015													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014													Calendar Year 2015													
							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) Unmanned Influenced Sweep System																																	
	1	2017	NAVY	1	-	1																							1				
2.1.1) AMNS																																	
	3	2013	NAVY	1	-	1																							-				
	2	2016	NAVY	2	-	2																							2				
2.1.2) ALMDS ⁽¹⁾																																	
	4	2014	NAVY	1	-	1																							-				
	4	2016	NAVY	2	-	2																							2				
	4	2017	NAVY	1	-	1																							1				
2.1.3) AN/AQS-20A ⁽²⁾																																	
	5	2013	NAVY	1	-	1																							1				
	5	2014	NAVY	1	-	1																							1				
	5	2016	NAVY	6	-	6																							6				
3.1.1) COBRA ⁽³⁾																																	
	6	2017	NAVY	1	-	1																							1				
4.1.1) KNIFEFISH ⁽⁴⁾																																	
	7	2017	NAVY	1	-	1																							1				
6.1.3) MCM INCREMENTAL WHOLENESS - AQS-20A																																	
	8	2013	NAVY	1	-	1																							1				
	8	2014	NAVY	2	-	2																							2				
	8	2015	NAVY	1	-	1																							1				
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1601 / LCS MCM Mission Modules **Item Number / Title [DODIC]:** 1 / LCS MCM Mission Packages

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2018													Fiscal Year 2019												BALANCE		
O C C O	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) Unmanned Influenced Sweep System																																
	1	2017	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2.1.1) AMNS																																
	3	2013	NAVY	1	1	-																										
	2	2016	NAVY	2	-	2	-	-	1	1																						
2.1.2) ALMDS ⁽¹⁾																																
	4	2014	NAVY	1	1	-																										
	4	2016	NAVY	2	2	-																										
	4	2017	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	1																
2.1.3) AN/AQS-20A ⁽²⁾																																
	5	2013	NAVY	1	1	-																										
	5	2014	NAVY	1	1	-																										
	5	2016	NAVY	6	-	6	-	-	-	-	-	2	2	2																		
3.1.1) COBRA ⁽³⁾																																
	6	2017	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1													
4.1.1) KNIFEFISH ⁽⁴⁾																																
	7	2017	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	1																
6.1.3) MCM INCREMENTAL WHOLENESS - AQS-20A																																
	8	2013	NAVY	1	1	-																										
	8	2014	NAVY	2	2	-																										
	8	2015	NAVY	1	1	-																										
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1601 / LCS MCM Mission Modules	Item Number / Title [DODIC]: 1 / LCS MCM Mission Packages
--	--	---

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	Textron - Hunt Valley, MD	1	2	8	3	3	24	27	3	3	3	24	27
2	TBD - TBD	1	4	8	3	3	17	20	3	3	3	17	20
3	Raytheon - Portsmouth, RI	1	4	8	3	3	17	20	3	3	3	17	20
4	Northrop Grumman - Melborn, FL	1	4	8	3	3	18	21	3	3	3	18	21
5	Raytheon - Portsmouth, RI	1	4	8	3	-	24	24	3	-	-	24	24
6	ARETE - TUCSON, AZ	2	6	12	-	-	18	18	-	-	-	18	18
7	General Dynamics MS - Mcleansville, NC	2	4	10	3	6	18	24	-	3	3	15	18
8	Raytheon - Portsmouth, RI	1	4	8	3	-	24	24	3	-	-	24	24

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules
--	--

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603596N
--	---	---

Line Item MDAP/MAIS Code: 000	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	31.952	-	31.952	53.465	53.722	54.717	55.812	375.415	625.083
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	31.952	-	31.952	53.465	53.722	54.717	55.812	375.415	625.083
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	31.952	-	31.952	53.465	53.722	54.717	55.812	375.415	625.083

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	0.954	0.080	-	0.080	0.346	0.541	0.334	0.313	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Anti-Submarine Warfare (ASW) mission package enables the Littoral Combat Ship (LCS) to conduct detect-to-engage operations against modern submarines that pose a threat. Specific ASW capabilities include protecting forces in transit, protecting joint operating areas, and establishing ASW barriers. ASW Modules are developed to provide the warfighter capabilities that can be employed for ASW area search as well as high value unit escort missions. Module components include a torpedo countermeasures system, a Variable Depth Sonar (VDS) and a Multi-Function Towed Array (MFTA). The Aviation Module provides airborne threat localization and engagement capability through an MH-60R helicopter with MK54 torpedoes and the ability to incorporate a Fire Scout Vertical Takeoff and Landing Unmanned Aerial Vehicle.

An ASW Mission Package is deployable and capable of meeting its focused mission requirements on an LCS only when it includes the full complement of Common Mission Modules Equipment (Line Item Number 1600) and the full complement of mission systems that comprise the LCS ASW Mission Module (Line Item Number 1602). If mission systems are removed from the mission module in any given Fiscal Year, the ASW Mission Package will be non-deployable until the mission system is replaced in a subsequent Fiscal Year.

LCS deployments are based on a 3:2:1 operational model. This means 3 crews will rotate between 2 ships/mission packages with 1 ship and mission package continuously deployed. The three crews will rotate on a fixed interval between being deployed on the forward deployed (OCONUS) LCS, training onboard the CONUS-based LCS, and conducting basic training and certifications while off-hull at the LCS Squadron and Littoral Training Facility. Mission Module crews will follow a similar rotation on the same interval. Therefore, of the total number of LCS with ASW Mission Package embarked, half will be deployed continuously and half will operate from the CONUS homeport LCS conducting work-ups for the upcoming interval on a forward deployed LCS.

The number of LCS mission packages must not only keep pace with the number of ships, more are required to account for the mission packages that will be forward staged or unavailable due to periodic maintenance requirements.

Other Related Budgets: BLIs: OPN 1600, OPN 1601, OPN 1603, OPN 1605, RDT&E 0603596N

ASW MP Quantities Procured:

Prior Years: ASW = 0

FY 2014: ASW = 0

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support		P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603596N
Line Item MDAP/MAIS Code: 000	Item MDAP/MAIS Code(s): N/A	
<p>FY 2015: ASW = 0 FY 2016: ASW = 1 (RDTEN funded) FY 2017: ASW = 1 FY 2018: ASW = 2 FY 2019: ASW = 2 FY 2020: ASW = 2 FY 2021: ASW = 2</p> <p>Total ASW MPs Delivered/Deployable: Prior Years: ASW= 0 FY 2014: ASW = 0 FY 2015: ASW = 0 FY 2016: ASW = 0 FY 2017: ASW = 1 FY 2018: ASW = 1 FY 2019: ASW = 2 FY 2020: ASW = 4 FY 2021: ASW = 6</p> <p>[P5 / (AS001) - ASW Escort Module]: The ASW Escort Mission Module (MM) contains the sensors and signal processing required to detect, classify and localize submarine threats. The Escort MM consists of two towed sensors; a VDS active source and an MFTA passive/bi-static active receiver; launch, handling and recovery equipment for the towed sensors, and AN/SQQ-89 V(15) active and passive signal processing applications.</p> <p>[P5 / (AS002) - Torpedo Defense Countermeasure Module]: The Light Weight Tow (LWT) system is a towed persistent torpedo countermeasure optimized for use in littoral conditions. LWT is a standalone autonomous system capable of defeating threat torpedoes through soft-kill to independently increase LCS Platform Probability of Survival.</p> <p>[P5 / (AS005) - ASW Mission Package Containers]: The foundation of each ASW Support Container (SC) is an International Organization for Standardization (ISO) compliant shipping container. The ISO shipping containers are outfitted with Unistrut rails (for shelving and drawer attachments), lighting (standard/emergency), fire/smoke alarms, service panels for power, and a circuit breaker box. From this base container configuration, a variety of racks, cradles, and handling gear can be installed as needed to form a SC.</p> <p>[P5 / (AS900) - Consulting Services]: Provides program management support, engineering and technical support, studies, analysis and evaluation on mission module systems.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15:
Other Ship Support **P-1 Line Item Number / Title:**
1602 / LCS ASW Mission Modules

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603596N

Line Item MDAP/MAIS Code: 000 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / LCS ASW Mission Modules	P-5a, P-21		- / 0.000	- / -	- / -	- / 21.732	- / -	- / 21.732
P-3a	1 / ASW MP Modifications (TBD)			- / 0.000	- / -	- / -	- / 10.220	- / -	- / 10.220
P-40	Total Gross/Weapon System Cost			- / 0.000	- / -	- / -	- / 31.952	- / -	- / 31.952

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / LCS ASW Mission Modules	P-5a, P-21		- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / ASW MP Modifications (TBD)			- / 10.508	- / 10.608	- / 10.716	- / 10.931	- / 86.989	- / 139.972
P-40	Total Gross/Weapon System Cost			- / 53.465	- / 53.722	- / 54.717	- / 55.812	- / 375.415	- / 625.083

*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.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15		P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules
		Item Number / Title [DODIC]: 1 / LCS ASW Mission Modules

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

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	-	-	21.732	-	21.732
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	-	-	21.732	-	21.732
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	-	-	21.732	-	21.732

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - (AS001) - ASW Escort Module Cost																		
Recurring Cost																		
1.1.1) Variable Depth Sonar ^(†)	-	-	0.000	-	-	-	-	-	-	12,872K	1	12.872	-	-	-	12,872K	1	12.872
1.1.2) Multi Function Towed Array ^(†)	-	-	0.000	-	-	-	-	-	-	5,354K	1	5.354	-	-	-	5,354K	1	5.354
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	18.226	-	-	-	-	-	18.226
<i>Subtotal: Hardware - (AS001) - ASW Escort Module Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	18.226	-	-	-	-	-	18.226
Hardware - (AS002) - Torpedo Defense Countermeasure Module Cost																		
Recurring Cost																		
2.1.1) Light Weight Tow ^{(†) (1)}	-	-	0.000	-	-	-	-	-	-	347,500.00	2	0.695	-	-	-	347,500.00	2	0.695
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	0.695	-	-	-	-	-	0.695
<i>Subtotal: Hardware - (AS002) - Torpedo Defense Countermeasure Module Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	0.695	-	-	-	-	-	0.695
Hardware - (AS005) - ASW Mission Package Containers Cost																		
Recurring Cost																		
3.1.1) ASW Containers ^(†)	-	-	0.000	-	-	-	-	-	-	485,600.00	5	2.428	-	-	-	485,600.00	5	2.428
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	2.428	-	-	-	-	-	2.428

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy												Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15						P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules						Item Number / Title [DODIC]: 1 / LCS ASW Mission Modules					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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)
<i>Subtotal: Hardware - (AS005) - ASW Mission Package Containers Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	2.428	-	-	-	-	-	2.428
Support - (AS900) - Consulting Services Cost																		
4.1) Consulting Services	-	-	0.000	-	-	-	-	-	-	-	-	0.383	-	-	-	-	-	0.383
<i>Subtotal: Support - (AS900) - Consulting Services Cost</i>	-	-	0.000	-	-	-	-	-	-	-	-	0.383	-	-	-	-	-	0.383
Gross/Weapon System Cost	-	-	0.000	-	-	-	-	-	-	-	-	21.732	-	-	-	-	-	21.732

(†) indicates the presence of a P-5a

Footnotes:

(1) Each ASW Mission Package consists of 2 Light Weight Tows per package.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules	Item Number / Title [DODIC]: 1 / LCS ASW Mission Modules
--	--	--

Cost Elements	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
1.1.1) Variable Depth Sonar ^(†)		2017	TBD / TBD	C / FFP	NUWC Newport	Mar 2017	Sep 2018	1	12,872K	N		
1.1.2) Multi Function Towed Array ^(†)		2017	Lockheed Martin / Syracuse, NY	C / FPIF	NAVSEA	Mar 2017	Sep 2018	1	5,354K	N		
2.1.1) Light Weight Tow ^(†)		2017	TBD / TBD	C / CPFF	NUWC Newport	Mar 2017	Mar 2019	2	347,500.00	N		
3.1.1) ASW Containers ^(†)		2017	TBD / TBD	C / FFP	NAVSEA	Mar 2017	Mar 2019	5	485,600.00	N		

^(†) indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules	Item Number / Title [DODIC]: 1 / LCS ASW Mission Modules
--	--	--

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE	
O 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
1.1.1) Variable Depth Sonar																															
	1	2017	NAVY	1	-	1																								1	-
1.1.2) Multi Function Towed Array																															
	2	2017	NAVY	1	-	1																								1	-
2.1.1) Light Weight Tow ⁽¹⁾																															
	3	2017	NAVY	2	-	2																									2
3.1.1) ASW Containers																															
	4	2017	NAVY	5	-	5																									5
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules	Item Number / Title [DODIC]: 1 / LCS ASW Mission Modules
--	--	--

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019												Fiscal Year 2020												BALANCE	
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
1.1.1) Variable Depth Sonar																															
1		2017	NAVY	1	1	-																									
1.1.2) Multi Function Towed Array																															
2		2017	NAVY	1	1	-																									
2.1.1) Light Weight Tow ⁽¹⁾																															
3		2017	NAVY	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
3.1.1) ASW Containers																															
4		2017	NAVY	5	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules	Item Number / Title [DODIC]: 1 / LCS ASW Mission Modules
--	--	--

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	TBD - TBD	1	4	8	3	-	18	18	-	-	18	18
2	Lockheed Martin - Syracuse, NY	1	4	8	-	-	18	18	-	-	18	18
3	TBD - TBD	1	4	8	3	-	24	24	-	-	24	24
4	TBD - TBD	8	16	32	3	-	24	24	-	-	24	24

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules	Modification Number / Title: 1 / ASW MP Modifications
--	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	-	-	10.220	-	10.220	10.508	10.608	10.716	10.931	86.989	139.972
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	-	-	10.220	-	10.220	10.508	10.608	10.716	10.931	86.989	139.972
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	-	-	10.220	-	10.220	10.508	10.608	10.716	10.931	86.989	139.972

(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:

[ASW MP Kits] The anti-submarine warfare (ASW) mission package enables the Littoral Combat Ship (LCS) to conduct detect-to-engage operations against modern submarines that pose a threat. Specific ASW capabilities include protecting forces in transit, protecting joint operating areas, and establishing ASW barriers. ASW Modules are developed to provide the warfighter capabilities that can be employed for ASW area search as well as high value unit escort missions. Module components include a torpedo countermeasures system, a Variable Depth Sonar (VDS) and a Multi-Function Towed Array (MFTA). The Aviation Module provides airborne threat localization and engagement capability through a Fire Scout Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle (VTUAV) and an MH-60R helicopter with MK54 torpedoes.

Funds the modifications to the current LCS designs to accommodate the ASW Increment II mission package configuration. A total of 29 ships will require modification.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15				P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules						Modification Number / Title: 1 / ASW MP Modifications			
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: ASW MP Modifications</i>													
A Kits													
Recurring													
1.1.1) ASW MP Kits - NonOrganic	- / -	- / -	- / -	2 / 1.794	- / -	2 / 1.794	2 / 1.800	2 / 1.791	2 / 1.799	2 / 1.835	19 / 20.165	29 / 29.184	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 1.794	- / -	- / 1.794	- / 1.800	- / 1.791	- / 1.799	- / 1.835	- / 20.165	- / 29.184	
<i>Subtotal: ASW MP Modifications</i>	- / -	- / -	- / -	2 / 1.794	- / -	2 / 1.794	2 / 1.800	2 / 1.791	2 / 1.799	2 / 1.835	19 / 20.165	29 / 29.184	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 1.794	- / -	- / 1.794	- / 1.800	- / 1.791	- / 1.799	- / 1.835	- / 20.165	- / 29.184	
Support (All Modification Items)													
3.1) Engineering Services	- / 0.000	- / -	- / -	- / 1.012	- / -	- / 1.012	- / 1.015	- / 1.012	- / 1.015	- / 1.035	- / 6.699	- / 11.788	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / 1.012	- / -	- / 1.012	- / 1.015	- / 1.012	- / 1.015	- / 1.035	- / 6.699	- / 11.788	
Installation													
<i>Modification Item 1 of 1: ASW MP Modifications</i>	- / 0.000	- / -	- / -	- / 17.414	- / -	- / 17.414	- / 17.693	- / 17.805	- / 17.902	- / 18.061	- / 60.125	- / 99.000	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 17.414	- / -	- / 17.414	- / 17.693	- / 17.805	- / 17.902	- / 18.061	- / 60.125	- / 99.000	
Total													
Total Cost (Procurement + Support + Installation)	0.000	-	-	10.220	-	10.220	10.508	10.608	10.716	10.931	86.989	139.972	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1602 / LCS ASW Mission Modules	Modification Number / Title: 1 / ASW MP Modifications

Modification Item 1 of 1: ASW MP Modifications

Manufacturer Information

Manufacturer Name: LOCKHEED MARTIN	Manufacturer Location: Marinette, WI
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 3

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Nov 2016	Nov 2017	Nov 2018	Nov 2019	Nov 2020
Delivery Dates			Feb 2017	Feb 2018	Feb 2019	Feb 2020	Feb 2021

Manufacturer Name: Austal	Manufacturer Location: Mobile, AL
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 3

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Nov 2016	Nov 2017	Nov 2018	Nov 2019	Nov 2020
Delivery Dates			Feb 2017	Feb 2018	Feb 2019	Feb 2020	Feb 2021

Installation Information

Method of Implementation: [none specified]:: Installation Name: ASW MP Kits

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	2 / 7.414	- / -	2 / 7.414	- / -	- / -	- / -	- / -	- / -	2 / 7.414
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	2 / 7.693	- / -	- / -	- / -	- / -	2 / 7.693
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 7.805	- / -	- / -	- / -	2 / 7.805
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 7.902	- / -	- / -	2 / 7.902
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 8.061	- / -	2 / 8.061
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 60.125	19 / 60.125
Total	- / -	- / -	- / -	2 / 7.414	- / -	2 / 7.414	2 / 7.693	2 / 7.805	2 / 7.902	2 / 8.061	19 / 60.125	29 / 99.000

Installation Schedule

PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	19	29
Out	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	19	29

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1603 / LCS SUW Mission Modules
--	--

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

Line Item MDAP/MAIS Code: 000	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	49.782	14.750	35.228	22.466	-	22.466	43.885	40.384	41.306	42.130	322.137	612.068
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	49.782	14.750	35.228	22.466	-	22.466	43.885	40.384	41.306	42.130	322.137	612.068
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	49.782	14.750	35.228	22.466	-	22.466	43.885	40.384	41.306	42.130	322.137	612.068

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	4.739	2.242	-	-	-	1.361	1.079	-	-	-	9.421
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2017 funding request was reduced by \$4.489 million to account for the availability of prior years execution balance.

The Surface Warfare (SUW) mission package increases firepower and offensive/defensive capabilities against large numbers of highly maneuverable, fast, small craft threats, giving LCS the ability to protect the sea lanes and move a force quickly through a choke point or other strategic waterway. With the SUW mission package embarked, LCS has enhanced detection and engagement capability against enemy small craft and similar littoral surface threats. The SUW (Phase 2) mission package is composed of two high velocity 30mm cannons to augment the ship's 57mm gun, embarked support aircraft (MH-60R helicopter with Hellfire missile) and the Maritime Security Module to support the embarkation of visit, board, search, and seizure (VBSS) teams. Six SUW mission packages have been delivered to the Fleet and one more is in production. Future SUW mission package phases include the addition of the MQ-8 Fire Scout Vertical Take-off and Landing Tactical Unmanned Aerial Vehicle (VTUAV) for the detection, identification, and classification of surface contacts, and a Surface-to-Surface Missile Module (SSMM) to provide in-close and eventually an over-the-horizon engagement capability against surface threats.

A SUW mission package is deployable and capable of meeting its focused mission requirements on an LCS only when it includes the full complement of Common Mission Modules Equipment (Line Item Number 1600) and the full complement of mission systems that comprise the LCS SUW Mission Module (Line Item Number 1603). If mission systems are removed from the mission module in any given Fiscal Year, the SUW Mission Package will be non-deployable until the mission system is replaced in a subsequent Fiscal Year.

LCS deployments are based on a 3:2:1 operational model. This means 3 crews will rotate between 2 ships/mission packages with 1 ship and mission package continuously deployed. The three crews will rotate on a fixed interval between being deployed on the forward deployed (OCONUS) LCS, training onboard the CONUS-based LCS, and conducting basic training and certifications while off-hull at the LCS Squadron and Littoral Training Facility. Mission Module crews will follow a similar rotation on the same interval. Therefore, of the total number of LCS with SUW Mission Package embarked, half will be deployed continuously and half will operate from the CONUS homeport LCS conducting work-ups for the upcoming interval on a forward deployed LCS.

The number of LCS mission packages must not only keep pace with the number of ships, more are required to account for the mission packages that will be forward staged or unavailable due to periodic maintenance requirements.

Other Related Budgets: BLIs: OPN 1600, OPN 1601, OPN 1602, OPN 1605, OPN 4248, OPN 2622, OPN 2624, WPN 4221, WPN 4225, RDT&E 0603596N

Prior to FY13, SUW mission module systems were funded under OPN BLI 1600.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support		P-1 Line Item Number / Title: 1603 / LCS SUW Mission Modules
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 000	Item MDAP/MAIS Code(s): N/A	
<p>SUW MP Quantities Procured: Prior Years: 5 SUW MPs, 1 training asset (non-deployable) FY 2014: SUW = 1 FY 2015: SUW = part of 1 FY 2016: SUW = part of 1, 1 full MP FY 2017: SUW = 1 FY 2018: SUW = 1 FY 2019: SUW = 1 FY 2020: SUW = 1 FY 2021: SUW = 1</p> <p>Total SUW MPs Delivered/Deployable: Prior Years: 3 FY 2014: SUW = 4 FY 2015: SUW = 6 FY 2016: SUW = 7 FY 2017: SUW = 7 FY 2018: SUW = 9 FY 2019: SUW = 10 FY 2020: SUW = 11 FY 2021: SUW = 12</p> <p>[P40A / SU001 - GUN MODULE]: The gun mission module (GMM) is comprised of two high velocity 30mm cannons to augment the ship's 57mm gun, and embarked support aircraft (MH-60R helicopter with Hellfire missile and the MQ-8B Fire Scout Vertical Take-off and Landing Tactical Unmanned Aerial Vehicle (VTUAV)) for the detection, identification, and classification of surface contacts.</p> <p>[P40A / SU002 - SURFACE-TO-SURFACE MISSILE MODULE (SSMM)]: The Surface-to-Surface Missile Module (SSMM) will provide in-close and eventually an over-the-horizon engagement capability against surface threats.</p> <p>[P40A / SU003 - MARITIME SECURITY MODULE]: The Maritime Security Module (MSM) provides LCS with the capability to conduct Level II visit, board, search and seizure (VBSS) operations and the ability to conduct anti-piracy and maritime interdiction missions. This budget line procures hardware for a full MSM that includes two 11 meter Rigid Hull Inflatable Boats (RHIB), two boat cradles, a VBSS Allowance Equipment List (AEL) for communications and tactical equipment, and habitability and support containers. Funding also includes production, assembly, installation and checkout of all mission system components.</p> <p>[P40A / SU900 - CONSULTING SERVICES]: Provides program management support, engineering and technical support, studies, analysis and evaluation on mission module systems.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1603 / LCS SUW Mission Modules
--	--

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

Line Item MDAP/MAIS Code: 000	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	LCS SUW Mission Packages	P-5a, P-21		- / 49.782	- / 14.750	- / 35.228	- / 22.466	- / -	- / 22.466
P-40	Total Gross/Weapon System Cost			- / 49.782	- / 14.750	- / 35.228	- / 22.466	- / -	- / 22.466

*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.

--

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules **Aggregated Items Title:** LCS SUW Mission Packages

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) SU001 - GUN MODULE																				
1.1) GUN MODULE ^(†)	A		5,803K	6	34.819	-	-	-	4,536K	4	18.144	4,252K	2	8.505	-	-	-	4,252K	2	8.505
1.2) MK-46 Gun Weapon System ^(†)	A		4,389K	2	8.778	5,267K	2	10.534	4,566K	2	9.133	4,608K	2	9.216	-	-	-	4,608K	2	9.216
1.3) PRODUCTION ENGINEERING SUPPORT	A		-	-	4.236	-	-	0.941	-	-	1.738	-	-	1.804	-	-	-	-	-	1.804
Subtotal: 1) SU001 - GUN MODULE			-	-	47.833	-	-	11.475	-	-	29.015	-	-	19.525	-	-	-	-	-	19.525
3) SU003 - MARITIME SECURITY MODULE																				
3.1) MARITIME SECURITY MODULE ^(†)	A		-	-	-	2,575K	1	2.575	2,550K	2	5.100	2,201K	1	2.201	-	-	-	2,201K	1	2.201
3.2) PRODUCTION ENGINEERING	A		-	-	0.296	-	-	0.300	-	-	0.613	-	-	0.230	-	-	-	-	-	0.230
Subtotal: 3) SU003 - MARITIME SECURITY MODULE			-	-	0.296	-	-	2.875	-	-	5.713	-	-	2.431	-	-	-	-	-	2.431
4) SU900 - CONSULTING SERVICES																				
4.1) CONSULTING SERVICES	A		-	-	1.653	-	-	0.400	-	-	0.500	-	-	0.510	-	-	-	-	-	0.510
Subtotal: 4) SU900 - CONSULTING SERVICES			-	-	1.653	-	-	0.400	-	-	0.500	-	-	0.510	-	-	-	-	-	0.510
Total			-	-	49.782	-	-	14.750	-	-	35.228	-	-	22.466	-	-	-	-	-	22.466

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1603 / LCS SUW Mission Modules	Aggregated Items: LCS SUW Mission Packages
--	--	--

Item Number / Title [DODIC]	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) SU001 - GUN MODULE												
1.1) GUN MODULE ^(†)		2013	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Jun 2013	Dec 2014	4	6,525K	Y		
1.1) GUN MODULE ^(†)		2014	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	C / CPFF	NAVSEA	Dec 2014	Jun 2016	2	4,360K	Y		
1.1) GUN MODULE ^(†)		2016	NORTHROP GRUMMAN / BETHPAGE, NEW YORK	SS / FFP	NAVSEA	Jun 2016	Dec 2017	4	4,536K	Y		
1.1) GUN MODULE ^(†)		2017	TBD / TBD	C / FFP	NAVSEA	Mar 2017	Sep 2018	2	4,252K	N		
1.2) MK-46 Gun Weapon System ^(†)		2014	General Dynamics Land Systems / Sterling Heights, MI	SS / FFP	NAVSEA	Jan 2015	Jul 2016	2	4,389K	Y		
1.2) MK-46 Gun Weapon System ^(†)		2015	General Dynamics Land Systems / Sterling Heights, MI	SS / FFP	NAVSEA	Apr 2016	Feb 2018	2	5,267K	Y		
1.2) MK-46 Gun Weapon System ^(†)		2016	General Dynamics Land Systems / Sterling Heights, MI	SS / FFP	NAVSEA	Apr 2016	Oct 2017	2	4,566K	Y		
1.2) MK-46 Gun Weapon System ^(†)		2017	General Dynamics Land Systems / Sterling Heights, MI	SS / FFP	NAVSEA	Mar 2017	Sep 2018	2	4,608K	N		
3) SU003 - MARITIME SECURITY MODULE												
3.1) MARITIME SECURITY MODULE ^(†)		2015	Various / Various	C / CPFF	NAVSEA	Mar 2015	Mar 2016	1	2,575K	Y		
3.1) MARITIME SECURITY MODULE ^(†)		2016	Various / Various	C / CPFF	NAVSEA	Mar 2016	Mar 2017	2	2,550K	N		

^(†) indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules **Aggregated Items:** LCS SUW Mission Packages

Items <i>(Units in Each)</i>						Fiscal Year 2013												Fiscal Year 2014												BALANCE					
OCO #	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2012	BAL DUE AS OF 1 OCT	Calendar Year 2013												Calendar Year 2014																
							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) SU001 - GUN MODULE																																			
1.1) GUN MODULE																																			
25		2013	NAVY	4	-	4																												4	
25		2014	NAVY	2	-	2																												2	
25		2016	NAVY	4	-	4																												4	
26		2017	NAVY	2	-	2																													2
1.2) MK-46 Gun Weapon System																																			
27		2014	NAVY	2	-	2																												2	
27		2015	NAVY	2	-	2																													2
27		2016	NAVY	2	-	2																													2
27		2017	NAVY	2	-	2																													2
3) SU003 - MARITIME SECURITY MODULE																																			
3.1) MARITIME SECURITY MODULE																																			
28		2015	NAVY	1	-	1																												1	
28		2016	NAVY	2	-	2																													2
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules **Aggregated Items:** LCS SUW Mission Packages

Items <i>(Units in Each)</i>				Fiscal Year 2015														Fiscal Year 2016														BALANCE			
O C C #	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					
1) SU001 - GUN MODULE																																			
1.1) GUN MODULE																																			
25	2013	NAVY		4	-	4	-	-	2	-	2																							-	
25	2014	NAVY		2	-	2			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2		-	
25	2016	NAVY		4	-	4																									A -	-	-	-	4
26	2017	NAVY		2	-	2																												2	
1.2) MK-46 Gun Weapon System																																			
27	2014	NAVY		2	-	2				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2		-	
27	2015	NAVY		2	-	2																									A -	-	-	-	2
27	2016	NAVY		2	-	2																									A -	-	-	-	2
27	2017	NAVY		2	-	2																												2	
3) SU003 - MARITIME SECURITY MODULE																																			
3.1) MARITIME SECURITY MODULE																																			
28	2015	NAVY		1	-	1																										1		-	
28	2016	NAVY		2	-	2																									A -	-	-	-	2
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1603 / LCS SUW Mission Modules **Aggregated Items:** LCS SUW Mission Packages

Items <i>(Units in Each)</i>					Fiscal Year 2017													Fiscal Year 2018													BALANCE		
O 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			
1) SU001 - GUN MODULE																																	
1.1) GUN MODULE																																	
	25	2013	NAVY	4	4	-																							-				
	25	2014	NAVY	2	2	-																							-				
	25	2016	NAVY	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2							-				
	26	2017	NAVY	2	-	2																						2	-				
1.2) MK-46 Gun Weapon System																																	
	27	2014	NAVY	2	2	-																							-				
	27	2015	NAVY	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-										-				
	27	2016	NAVY	2	-	2	-	-	-	-	-	-	-	-	-	-	-	2											-				
	27	2017	NAVY	2	-	2																						2	-				
3) SU003 - MARITIME SECURITY MODULE																																	
3.1) MARITIME SECURITY MODULE																																	
	28	2015	NAVY	1	1	-																							-				
	28	2016	NAVY	2	-	2	-	-	-	-	-	2																	-				
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1603 / LCS SUW Mission Modules	Aggregated Items: LCS SUW Mission Packages
--	--	--

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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	NORTHROP GRUMMAN - BETHPAGE, NEW YORK	1	2	8	-	3	18	21	3	3	18	21
2	TBD - TBD	1	2	8	-	3	18	21	3	3	18	21
3	General Dynamics Land Systems - Sterling Heights, MI	2	6	18	3	-	22	22	3	-	18	18
4	Various - Various	1	4	8	2	2	12	14	2	2	12	14

"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).

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15:
Other Ship Support **P-1 Line Item Number / Title:**
1605 / Remote Minehunting System (RMS)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603596N, 0603502N, 0603581N, 0604122N

Line Item MDAP/MAIS Code: 286 **Item MDAP/MAIS Code(s):** N/A

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	53.077	-	-	-	-	-	-	-	-	53.077
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	53.077	-	-	-	-	-	-	-	-	53.077
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	53.077	-	-	-	-	-	-	-	-	53.077

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AN/WLD-1(V)2 Remote Mine hunting System (RMS) is a mine reconnaissance system designed for the detection, classification, identification, and localization of bottom and moored mines in shallow and deep water. The RMS will provide the Navy the capability to keep ships and sailors out of the minefield. RMS is deployed from the Littoral Combat Ship (LCS) as part of the ships' Mine Countermeasures (MCM) Mission Package (MP). RMS is a fully integrated system consisting of a semi-submersible Remote Multi-Mission Vehicle (RMMV), towing the AN/AQS-20A variable depth mine hunting sonar system.

This budget line supports the Remote Multi-Mission Vehicle (RMMV). The RMMV is a high-endurance, semi-autonomous, low-observable, unmanned, diesel-powered vehicle, operated and maintained from the LCS. Line-of-sight (LOS) and over-the-horizon (OTH) data links provide real time vehicle command and control and mine reconnaissance sensor data transmission to/from LCS.

The FY 2016 budget supports the upgrade of two (2) Remote Multi-Mission Vehicles (RMMVs) from the v4.0 to the v6.0 baseline configuration. The v6.0 configuration is the latest and only configuration deployable on the host Littoral Combat Ship (LCS) platform. RMMV v6.0 includes Reliability Growth Program improvements, Multi-Vehicle Communications System (MVCS), LCS Launch Handling and Recovery enhancements, and suitability improvements to support delivery to the fleet.

An MCM Mission Package is deployable and capable of meeting its focused mission requirements on an LCS only when it includes the full complement of Common Mission Modules Equipment (Budget Line Item Number 1600) and the full complement of mission systems that comprise the LCS MCM Mission Module (Budget Line Item Number 1601) and Remote Mine hunting Systems (RMS) (Line Item Number 1605). If mission systems are removed in any given Fiscal Year, the MCM Mission Package will be non-deployable until the mission systems are replaced in a subsequent Fiscal Year.

Two (2) Remote Multi-Mission Vehicles (RMMVs) are required for every one (1) MCM Mission Package. Any reductions to RMMV procurement funding will impact the delivery timeline of MCM Mission Packages to the Fleet.

The RMS program is currently under evaluation by the Department's Independent Review Team (IRT). Funding for this line was realigned to other Navy priorities supporting mine countermeasures.

Other Related Budgets: BLIs: OPN 1600, OPN 1601

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 15: Other Ship Support	P-1 Line Item Number / Title: 1605 / Remote Minehunting System (RMS)
--	--

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603596N, 0603502N, 0603581N, 0604122N
--	---	---

Line Item MDAP/MAIS Code: 286	Item MDAP/MAIS Code(s): N/A
--------------------------------------	------------------------------------

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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 / Remote Minehunting System (RMS)	P-5a, P-21		- / 0.000	- / -	- / 53.077	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 0.000	- / -	- / 53.077	- / -	- / -	- / -

*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.

--

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1605 / Remote Minehunting System (RMS)	Item Number / Title [DODIC]: 1 / Remote Minehunting System (RMS)

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

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	-	53.077	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	-	53.077	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	-	53.077	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 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 - RM001 - REMOTE MINEHUNTING Cost																		
Recurring Cost																		
1.1.1) Remote Multi-Mission Vehicle (RMMV) ^(†)	-	-	-	-	-	-	34,927K	1	34.927	-	-	-	-	-	-	-	-	-
1.1.2) RMMV v6.0 Mod Kits ^{(†) (1)}	-	-	-	-	-	-	9,000K	2	18.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	52.927	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - RM001 - REMOTE MINEHUNTING Cost</i>	-	-	-	-	-	-	-	-	52.927	-	-	-	-	-	-	-	-	-
Support - RM002 - PRODUCTION ENGINEERING Cost																		
2.1) Production Engineering	-	-	-	-	-	-	-	-	0.150	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - RM002 - PRODUCTION ENGINEERING Cost</i>	-	-	-	-	-	-	-	-	0.150	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	0.000	-	-	-	-	-	53.077	-	-	-	-	-	-	-	-	-

^(†) indicates the presence of a P-5a

Footnotes:

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1605 / Remote Minehunting System (RMS)	Item Number / Title [DODIC]: 1 / Remote Minehunting System (RMS)
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
<p>⁽¹⁾ 1.1.2) RMMV v6.0 Mod Kits Upgrades of Remote Multi-Mission Vehicles (RMMVs) from the v4.0 to the v6.0 baseline configuration. The v6.0 configuration is the latest and only configuration deployable on the host Littoral Combat Ship (LCS) platform. RMMV v6.0 includes Reliability Growth Program improvements, Multi-Vehicle Communications System (MVCS), LCS Launch Handling and Recovery enhancements, and suitability improvements to support delivery to the fleet.</p>		

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1605 / Remote Minehunting System (RMS)	Item Number / Title [DODIC]: 1 / Remote Minehunting System (RMS)
--	--	--

Cost Elements	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
1.1.1) Remote Multi-Mission Vehicle (RMMV) ^(†)		2016	Lockheed Martin / Riviera Beach, FL	SS / FPIF	NAVSEA	Aug 2016	Jun 2019	1	34,927K	Y		
1.1.2) RMMV v6.0 Mod Kits ^(†)		2016	Lockheed Martin / Riviera Beach, FL	SS / FFP	NAVSEA	Apr 2016	Jun 2017	2	9,000K	Y		

^(†) indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy																				Date: February 2016							
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15										P-1 Line Item Number / Title: 1605 / Remote Minehunting System (RMS)										Item Number / Title [DODIC]: 1 / Remote Minehunting System (RMS)							

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) Remote Multi-Mission Vehicle (RMMV)																															
1		2016	NAVY	1	-	1																									1
1.1.2) RMMV v6.0 Mod Kits ⁽¹⁾																															
2		2016	NAVY	2	-	2																									
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15 **P-1 Line Item Number / Title:** 1605 / Remote Minehunting System (RMS) **Item Number / Title [DODIC]:** 1 / Remote Minehunting System (RMS)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2018												Fiscal Year 2019												BALANCE		
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) Remote Multi-Mission Vehicle (RMMV)																															
1		2016	NAVY	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.1.2) RMMV v6.0 Mod Kits ⁽¹⁾																															
2		2016	NAVY	2	2	-																									
							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 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 15	P-1 Line Item Number / Title: 1605 / Remote Minehunting System (RMS)	Item Number / Title [DODIC]: 1 / Remote Minehunting System (RMS)
--	--	--

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2017	1-8-5 For 2017	MAX For 2017	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 - Riviera Beach, FL	1	4	6	-	-	34	34	-	-	24	24
2	Lockheed Martin - Riviera Beach, FL	1	2	4	3	-	14	14	-	-	14	14

"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).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 16: Logistic Support	P-1 Line Item Number / Title: 1610 / LSD Midlife
--	--

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	Item MDAP/MAIS Code(s): N/A
-------------------------------	-----------------------------

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	560.011	13.800	2.774	10.813	-	10.813	21.652	0.155	0.791	-	-	609.996
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	560.011	13.800	2.774	10.813	-	10.813	21.652	0.155	0.791	-	-	609.996
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	560.011	13.800	2.774	10.813	-	10.813	21.652	0.155	0.791	-	-	609.996

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Increases in FY2017 funding request attributable to procurement of Generators and Elect Distribution (8/ST002) FY2017 budgeted component, Canned Lube Oil Pump end item spare (6/ST002), Steering Control System (2/ST002) procurement and associated DSA, and Propeller Blades & PLMU (1/ST002) procurement and associated DSA requirements.

LSD 46 Midlife being installed as phased modernization. This budget provides funding for the LSD Mid-life Program. The LSD Mid-life Program replaces obsolete/unsupported HM&E systems and implements Total Operating Cost (TOC) savings upgrades to maintain amphibious warfare capabilities through DECOM (2038). Primary objectives are to maintain or improve readiness, safety, reliability, lower maintenance costs, improve sailor quality of life, and/or sustain the LSD ship class through their notional service life or beyond. The budget purchases equipment including generators, Low Pressure Air Compressors (LPAC), Canned Lube Oil Pumps, A/C Plants, and 60T deck crane control systems.

ST001 - The LSD Mid-life Program replaces obsolete/unsupported HM&E systems and legacy C5I systems, and implements TOC savings upgrades to maintain amphibious warfare capabilities through DECOM (2038). These include items such as LPAC, Steering Control Systems (SCS), A/C-plants, Generators, Propulsion Load Management Units (PLMU), Reverse Osmosis (RO) Desalinators, Automated Digital Network System (ADNS), Battle Force Tactical Network (BFTN), Digital Modular Radio (DMR), Global Broadcast System (GBS), Information Systems Security Program (KMI and KW46), Naval Modular Automated Communications System (NAVMACS), Advanced Digital Antenna Production (ADAP), Navy Multiband Terminal (NMT), and CRYPTO.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity:
1810N: Other Procurement, Navy / BA 01: Ships Support Equipment / BSA 16: Logistic Support

P-1 Line Item Number / Title:
1610 / LSD Midlife

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 **Item MDAP/MAIS Code(s):** N/A

Exhibits Schedule				Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Exhibit Type	Title*	Subexhibits	ID CD	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	LSD Midlife			- / 0.000	- / 13.800	- / -	- / -	- / -	- / -
P-3a	1 / ST002 - Propeller Blades & PLMU (TBD)			- / 17.737	- / -	- / -	- / 2.115	- / -	- / 2.115
P-3a	2 / ST002 - Steering Control System (TBD)			- / 50.708	- / -	- / -	- / 2.072	- / -	- / 2.072
P-3a	3 / ST002 - 30T Deck Crane Control Sys (TBD)			- / 13.164	- / -	- / -	- / -	- / -	- / -
P-3a	4 / ST002 - Low Pressure Air Compressor (TBD)			- / 16.430	- / -	- / 0.850	- / 0.327	- / -	- / 0.327
P-3a	5 / ST002 - RO & Generators (TBD)			- / 444.241	- / -	- / -	- / -	- / -	- / -
P-3a	6 / ST002 - Canned Lube Oil Pump (TBD)			- / 15.754	- / -	- / -	- / 0.789	- / -	- / 0.789
P-3a	7 / ST002 - Tech Refresh (TBD)			- / 1.977	- / -	- / -	- / -	- / -	- / -
P-3a	8 / ST002 - Generators & Elect Distribution (TBD)			- / 0.000	- / -	- / 1.924	- / 5.510	- / -	- / 5.510
P-3a	10 / ST002 - Generator LO Supply System (TBD)			- / 0.000	- / -	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / 560.011	- / 13.800	- / 2.774	- / 10.813	- / -	- / 10.813

Exhibits Schedule				FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	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	LSD Midlife			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / ST002 - Propeller Blades & PLMU (TBD)			- / 1.362	- / -	- / -	- / -	- / -	- / 21.214
P-3a	2 / ST002 - Steering Control System (TBD)			- / 1.828	- / -	- / -	- / -	- / -	- / 54.608
P-3a	3 / ST002 - 30T Deck Crane Control Sys (TBD)			- / -	- / -	- / -	- / -	- / -	- / 13.164
P-3a	4 / ST002 - Low Pressure Air Compressor (TBD)			- / 1.438	- / -	- / -	- / -	- / -	- / 19.045
P-3a	5 / ST002 - RO & Generators (TBD)			- / -	- / -	- / -	- / -	- / -	- / 444.241
P-3a	6 / ST002 - Canned Lube Oil Pump (TBD)			- / -	- / -	- / -	- / -	- / -	- / 16.543
P-3a	7 / ST002 - Tech Refresh (TBD)			- / -	- / -	- / -	- / -	- / -	- / 1.977
P-3a	8 / ST002 - Generators & Elect Distribution (TBD)			- / 17.024	- / -	- / -	- / -	- / -	- / 24.458
P-3a	10 / ST002 - Generator LO Supply System (TBD)			- / -	- / 0.155	- / 0.791	- / -	- / -	- / 0.946
P-40	Total Gross/Weapon System Cost			- / 21.652	- / 0.155	- / 0.791	- / -	- / -	- / 609.996

*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.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16 **P-1 Line Item Number / Title:** 1610 / LSD Midlife **Aggregated Items Title:** LSD Midlife

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2015			FY 2016			FY 2017 Base			FY 2017 OCO			FY 2017 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) ST001 C4I Systems ⁽¹⁾																				
1.1) Automated Digital Network System (ADNS)	A		-	-	-	-	-	0.497	-	-	-	-	-	-	-	-	-	-	-	-
1.2) Battle Force Tactical Network (BFTN)	A		-	-	-	-	-	0.220	-	-	-	-	-	-	-	-	-	-	-	-
1.3) Digital Modular Radio (DMR)	A		-	-	-	-	-	0.755	-	-	-	-	-	-	-	-	-	-	-	-
1.4) Global Broadcast System (GBS)	A		-	-	-	-	-	0.383	-	-	-	-	-	-	-	-	-	-	-	-
1.5) Information Systems Security Program (KMI and KW46)	A		-	-	-	-	-	0.110	-	-	-	-	-	-	-	-	-	-	-	-
1.6) Naval Modular Automated Communications System (NAVMACS)	A		-	-	-	-	-	0.301	-	-	-	-	-	-	-	-	-	-	-	-
1.7) Advanced Digital Antenna Production (ADAP)	A		-	-	-	-	-	0.425	-	-	-	-	-	-	-	-	-	-	-	-
1.8) Navy Multiband Terminal (NMT)	A		-	-	-	-	-	7.635	-	-	-	-	-	-	-	-	-	-	-	-
1.9) CRYPTO	A		-	-	-	-	-	0.082	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) ST001 C4I Systems			-	-	0.000	-	-	10.408	-	-	-	-	-	-	-	-	-	-	-	-
2) Install																				
2.1) Design Services Allocation (DSA)	A		-	-	-	-	-	3.392	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 2) Install			-	-	0.000	-	-	3.392	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	0.000	-	-	13.800	-	-	-	-	-	-	-	-	-	-	-	-

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

Footnotes:

⁽¹⁾ FY2015 ST001-C4I System funded via Ship Modernization, Operations, and Sustainment Funds (SMOSF).

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 1 / ST002 - Propeller Blades & PLMU
--	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	17.737	-	-	2.115	-	2.115	1.362	-	-	-	-	21.214
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	17.737	-	-	2.115	-	2.115	1.362	-	-	-	-	21.214
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	17.737	-	-	2.115	-	2.115	1.362	-	-	-	-	21.214
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This SHIPALT replaces the existing Propeller Blades with higher efficiency blades and installs Propulsion Load Management Units (PLMU) that result in fuel savings and engine maintenance reduction as well as operational benefits. The prototype for this SHIPALT was installed and proven aboard the LSD 44 under the DOD sponsored Commercial Operations and Support Savings Initiative (COSSI). Return On Investment (ROI) for the class is estimated at over \$40M (after payback) and operational benefits include increased top speed, quicker response/deceleration, and elimination of existing system performance problems (i.e., low lube-oil pressure trip of main engines). Only 9 LSDs will require this SHIPALT as part of the Midlife Program.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16					P-1 Line Item Number / Title: 1610 / LSD Midlife					Modification Number / Title: 1 / ST002 - Propeller Blades & PLMU			
Models of Systems Affected: Propeller Blades & PLMU				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1:</i> ST002 - Propeller Blades & PLMU													
B Kits													
Recurring													
1.1.1) FMP Ship Units - NonOrganic ⁽²⁾	7 / 7.121	- / -	- / -	1 / 1.742	- / -	1 / 1.742	- / -	- / -	- / -	- / -	- / -	8 / 8.863	
1.1.2) End Item Spares - Organic	2 / 1.938	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.938	
<i>Subtotal: Recurring</i>	- / 9.059	- / -	- / -	- / 1.742	- / -	- / 1.742	- / -	- / -	- / -	- / -	- / -	- / 10.801	
<i>Subtotal: ST002 - Propeller Blades & PLMU</i>	9 / 9.059	- / -	- / -	1 / 1.742	- / -	1 / 1.742	- / -	- / -	- / -	- / -	- / -	10 / 10.801	
<i>Subtotal: Procurement, All Modification Items</i>	- / 9.059	- / -	- / -	- / 1.742	- / -	- / 1.742	- / -	- / -	- / -	- / -	- / -	- / 10.801	
Installation													
<i>Modification Item 1 of 1:</i> ST002 - Propeller Blades & PLMU													
<i>Subtotal: Installation</i>	- / 8.678	- / -	- / -	- / 0.373	- / -	- / 0.373	- / 1.362	- / -	- / -	- / -	- / -	- / 10.413	
Total													
Total Cost (Procurement + Support + Installation)	17.737	-	-	2.115	-	2.115	1.362	-	-	-	-	21.214	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 1 / ST002 - Propeller Blades & PLMU

Modification Item 1 of 1: ST002 - Propeller Blades & PLMU

Manufacturer Information

Manufacturer Name: Rolls Royce	Manufacturer Location: Walpole, MA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Nov 2016				
Delivery Dates			Nov 2017				

Installation Information

Method of Implementation: SHIPYARD/AIT:: Installation Name: FMP Ship Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	7 / 8.678	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	7 / 8.678
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / 0.373	- / -	- / 0.373	1 / 1.362	- / -	- / -	- / -	- / -	1 / 1.735
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 8.678	- / -	- / -	- / 0.373	- / -	- / 0.373	1 / 1.362	- / -	- / -	- / -	- / -	8 / 10.413

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	7	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	8	

Method of Implementation (Organic): End Item Spares - Not Installed **Installation Quantity:** 2

Footnotes:
⁽²⁾ IN/OUT based on current phased mod availability. FY17 install cost is in support of DSA requirements on the FY18 install.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16				P-1 Line Item Number / Title: 1610 / LSD Midlife				Modification Number / Title: 2 / ST002 - Steering Control System				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	50.708	-	-	2.072	-	2.072	1.828	-	-	-	-	54.608
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	50.708	-	-	2.072	-	2.072	1.828	-	-	-	-	54.608
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	50.708	-	-	2.072	-	2.072	1.828	-	-	-	-	54.608
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This SHIPALT replaces the analog Helm and Lee Helm Steering Consoles and equipment with an electronic, computerized Steering Control System (SCS) that integrates various navigation parameters, such as location (latitude, longitude) from GPS as well as pitch, roll, speed, heading, and wind. SCS will be designed to integrate with Electronic Chart Display and Information Systems-Navy (ECDIS-N) digital nautical charts. The existing Bridge control system was designed in the late 1970s and is near the end of its useful service life. Parts obsolescence is a rapidly growing and more costly problem on this maintenance intensive control system. The IBS also provides significantly enhanced operational and monitoring capabilities as well as real-time Navigation data. This system will reduce workload, provide significant readiness improvement, improve safety and provide cost avoidance.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16					P-1 Line Item Number / Title: 1610 / LSD Midlife					Modification Number / Title: 2 / ST002 - Steering Control System			
Models of Systems Affected: Steering Control System				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1:</i> ST002 - Steering Control System													
B Kits													
Recurring													
1.1.1) Non-FMP Shore Site Units - NonOrganic	2 / 1.433	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.433	
1.1.2) FMP Ship Units - NonOrganic ⁽³⁾	11 / 9.582	- / -	- / -	1 / 0.844	- / -	1 / 0.844	- / -	- / -	- / -	- / -	- / -	12 / 10.426	
<i>Subtotal: Recurring</i>	- / 11.015	- / -	- / -	- / 0.844	- / -	- / 0.844	- / -	- / -	- / -	- / -	- / -	- / 11.859	
<i>Subtotal: ST002 - Steering Control System</i>	13 / 11.015	- / -	- / -	1 / 0.844	- / -	1 / 0.844	- / -	- / -	- / -	- / -	- / -	14 / 11.859	
<i>Subtotal: Procurement, All Modification Items</i>	- / 11.015	- / -	- / -	- / 0.844	- / -	- / 0.844	- / -	- / -	- / -	- / -	- / -	- / 11.859	
Installation													
<i>Modification Item 1 of 1:</i> ST002 - Steering Control System	- / 39.693	- / -	- / -	- / 1.228	- / -	- / 1.228	- / 1.828	- / -	- / -	- / -	- / -	- / 42.749	
<i>Subtotal: Installation</i>	- / 39.693	- / -	- / -	- / 1.228	- / -	- / 1.228	- / 1.828	- / -	- / -	- / -	- / -	- / 42.749	
Total													
Total Cost (Procurement + Support + Installation)	50.708	-	-	2.072	-	2.072	1.828	-	-	-	-	54.608	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 2 / ST002 - Steering Control System

Modification Item 1 of 1: ST002 - Steering Control System

Manufacturer Information

Manufacturer Name: Henschel	Manufacturer Location: Newburyport, MA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Nov 2016				
Delivery Dates			Nov 2017				

Installation Information

Method of Implementation: [none specified]:: Installation Name: Non-FMP Shore Site Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 / 7.102	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2 / 7.102
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 7.102	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 7.102

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Method of Implementation: SHIPYARD/AIT:: Installation Name: FMP Ship Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	11 / 32.591	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	11 / 32.591
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 2 / ST002 - Steering Control System

Modification Item 1 of 1: ST002 - Steering Control System

Installation Information

Method of Implementation: SHIPYARD/AIT:: Installation Name: FMP Ship Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / 1.228	- / -	- / 1.228	1 / 1.828	- / -	- / -	- / -	- / -	1 / 3.056
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 32.591	- / -	- / -	- / 1.228	- / -	- / 1.228	1 / 1.828	- / -	- / -	- / -	- / -	12 / 35.647

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	11	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	9	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

⁽³⁾ IN/OUT based on current phased mod availability. FY 2017 DSA (\$1.2 million) efforts in support of the FY 2018 LSD Class install.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 3 / ST002 - 30T Deck Crane Control Sys
--	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	13.164	-	-	-	-	-	-	-	-	-	-	13.164
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	13.164	-	-	-	-	-	-	-	-	-	-	13.164
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	13.164	-	-	-	-	-	-	-	-	-	-	13.164

(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 ship change replaces the control system for the 30 Ton Crane with a modern, electronic, computerized control system. The existing 30 Ton Crane control system was designed in the late 1970s and is no longer logistically supported. Maintenance costs continue to be high due to the difficulty in obtaining repair parts and frequent failure of components. In addition, mission capability has been frequently degraded because the Deck Crane is required to support USMC amphibious assault landings and boat ops.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy **Date:** February 2016

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16 **P-1 Line Item Number / Title:** 1610 / LSD Midlife **Modification Number / Title:** 3 / ST002 - 30T Deck Crane Control Sys

Models of Systems Affected: 30T Deck Crane **Modification Type:** TBD **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> ST002 - 30T Deck Crane Control Sys												
B Kits												
Recurring												
1.1.1) FMP Ship Units - NonOrganic ⁽⁴⁾	3 / 5.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 5.400
<i>Subtotal: Recurring</i>	- / 5.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.400
<i>Subtotal: ST002 - 30T Deck Crane Control Sys</i>	3 / 5.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 5.400
<i>Subtotal: Procurement, All Modification Items</i>	- / 5.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.400
Installation												
<i>Modification Item 1 of 1:</i> ST002 - 30T Deck Crane Control Sys	- / 17.764	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.764
<i>Subtotal: Installation</i>	- / 17.764	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.764
Total												
Total Cost (Procurement + Support + Installation)	13.164	-	-	-	-	-	-	-	-	-	-	13.164

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 3 / ST002 - 30T Deck Crane Control Sys

Modification Item 1 of 1: ST002 - 30T Deck Crane Control Sys

Manufacturer Information

Manufacturer Name: Rockwell	Manufacturer Location: Milwaukee, WI
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Dates							
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: SHIPYARD/AIT:: Installation Name: FMP Ship Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	3 / 7.764	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	3 / 7.764
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	3 / 7.764	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 7.764

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
In	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Out	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3

Footnotes:

(4) Total Requirement is 4 for the Program. Congressional Add Funds procured 1 in PY.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16				P-1 Line Item Number / Title: 1610 / LSD Midlife				Modification Number / Title: 4 / ST002 - Low Pressure Air Compressor				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	16.430	-	0.850	0.327	-	0.327	1.438	-	-	-	-	19.045
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	16.430	-	0.850	0.327	-	0.327	1.438	-	-	-	-	19.045
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	16.430	-	0.850	0.327	-	0.327	1.438	-	-	-	-	19.045
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Ship Change replaces the Low-Pressure Air Compressors (LPAC) with modern, oil-free compressors. Parts obsolescence is a rapidly growing and more costly problem on these maintenance intensive compressors. This Ship Change provides Return On Investment (ROI) through improved reliability and maintainability of LPACs and reduced maintenance by elimination of oil contamination of pneumatic controls components (new compressors are oil-free). In addition, the new compressors will provide significant readiness improvement through increased reliability of Vital, low-pressure air supply to Vital combat systems and the main propulsion controls.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 4 / ST002 - Low Pressure Air Compressor

Models of Systems Affected: LPAC	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> ST002 - Low Pressure Air Compressor												
B Kits												
Recurring												
1.1) FMP Ship Units - NonOrganic ⁽⁵⁾	7 / 5.730	- / -	1 / 0.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 6.480
<i>Subtotal: Recurring</i>	- / 5.730	- / -	- / 0.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.480
<i>Subtotal: ST002 - Low Pressure Air Compressor</i>	7 / 5.730	- / -	1 / 0.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 6.480
<i>Subtotal: Procurement, All Modification Items</i>	- / 5.730	- / -	- / 0.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.480
Installation												
<i>Modification Item 1 of 1:</i> ST002 - Low Pressure Air Compressor	- / 10.700	- / -	- / 0.100	- / 0.327	- / -	- / 0.327	- / 1.438	- / -	- / -	- / -	- / -	- / 12.565
<i>Subtotal: Installation</i>	- / 10.700	- / -	- / 0.100	- / 0.327	- / -	- / 0.327	- / 1.438	- / -	- / -	- / -	- / -	- / 12.565
Total												
Total Cost (Procurement + Support + Installation)	16.430	-	0.850	0.327	-	0.327	1.438	-	-	-	-	19.045

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 4 / ST002 - Low Pressure Air Compressor

Modification Item 1 of 1: ST002 - Low Pressure Air Compressor

Manufacturer Information

Manufacturer Name: RIX	Manufacturer Location: Benecia, CA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 16

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Jul 2016					
Delivery Dates		Nov 2017					

Installation Information

Method of Implementation: SHIPYARD/AIT:: Installation Name: FMP Ship Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	7 / 10.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	7 / 10.700
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / 0.100	- / 0.327	- / -	- / 0.327	1 / 1.438	- / -	- / -	- / -	- / -	1 / 1.865
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 10.700	- / -	- / 0.100	- / 0.327	- / -	- / 0.327	1 / 1.438	- / -	- / -	- / -	- / -	8 / 12.565

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	7	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	8	

Footnotes:

⁽⁵⁾ Shipset equals 3 LPAC to be installed on LSD 46. FY16 DSA efforts are required in order to re-compete the procurement and award contract for LSD 46 LPACs. FY17 DSA is for the standard year prior to install costs for Long Lead Time Material and Advanced Planning. IN/OUT based on current phased mod availability.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 5 / ST002 - RO & Generators
--	--	--

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	444.241	-	-	-	-	-	-	-	-	-	-	444.241
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	444.241	-	-	-	-	-	-	-	-	-	-	444.241
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	444.241	-	-	-	-	-	-	-	-	-	-	444.241
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This SHIPALT removes the auxiliary boilers and steam system equipment and replaces them with electrical equipment including Reverse Osmosis (RO) desalinateors which replace the steam evaporators, and numerous electric heaters and galley equipment replacing their steam counterparts. This SHIPALT provides significant Return On Investment (ROI) through improved reliability and maintainability of electrical ship systems/equipment versus the obsolete and maintenance intensive steam systems/equipment. Also, additional electrical plant loads will improve efficient operation of the currently under-loaded SSDGs and contribute to the ROI through reduced maintenance costs for the SSDGs. These ship systems will also increase ships force safety and eliminate personnel hazards from steam.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16					P-1 Line Item Number / Title: 1610 / LSD Midlife					Modification Number / Title: 5 / ST002 - RO & Generators			
Models of Systems Affected: RO Generator				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> ST002 - RO & Generators													
B Kits													
Recurring													
1.1.1) FMP Ship Units - NonOrganic	11 / 110.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 110.599	
<i>Subtotal: Recurring</i>	- / 110.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 110.599	
<i>Subtotal: ST002 - RO & Generators</i>	11 / 110.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 110.599	
<i>Subtotal: Procurement, All Modification Items</i>	- / 110.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 110.599	
Installation													
<i>Modification Item 1 of 1:</i> ST002 - RO & Generators	- / 333.642	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 333.642	
<i>Subtotal: Installation</i>	- / 333.642	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 333.642	
Total													
Total Cost (Procurement + Support + Installation)	444.241	-	-	-	-	-	-	-	-	-	-	444.241	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 5 / ST002 - RO & Generators

Modification Item 1 of 1: ST002 - RO & Generators

Manufacturer Information

Manufacturer Name: Aqua-Chem	Manufacturer Location: Knoxville, TN
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 21

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: SHIPYARD/AIT:: Installation Name: FMP Ship Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	11 / 333.642	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	11 / 333.642
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 333.642	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 333.642

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Out	9	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 6 / ST002 - Canned Lube Oil Pump
--	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	15.754	-	-	0.789	-	0.789	-	-	-	-	-	16.543
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	15.754	-	-	0.789	-	0.789	-	-	-	-	-	16.543
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	15.754	-	-	0.789	-	0.789	-	-	-	-	-	16.543

(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:

Procures and installs a lube oil pump and controllers for the main four (4) propulsion diesel engines, including piping and sensor modifications.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16					P-1 Line Item Number / Title: 1610 / LSD Midlife					Modification Number / Title: 6 / ST002 - Canned Lube Oil Pump			
Models of Systems Affected: Canned Lube Oil Pump					Modification Type: TBD					Related RDT&E PEs:			
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1: ST002 - Canned Lube Oil Pump</i>													
B Kits													
Recurring													
1.1.1) FMP Ship Units - NonOrganic ⁽⁶⁾	11 / 7.695	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 7.695	
1.1.2) End Item Spares - Organic	- / -	- / -	- / -	1 / 0.789	- / -	1 / 0.789	- / -	- / -	- / -	- / -	- / -	1 / 0.789	
<i>Subtotal: Recurring</i>	<i>- / 7.695</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.789</i>	<i>- / -</i>	<i>- / 0.789</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 8.484</i>	
<i>Subtotal: ST002 - Canned Lube Oil Pump</i>	<i>11 / 7.695</i>	<i>- / -</i>	<i>- / -</i>	<i>1 / 0.789</i>	<i>- / -</i>	<i>1 / 0.789</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>12 / 8.484</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 7.695</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.789</i>	<i>- / -</i>	<i>- / 0.789</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 8.484</i>	
Installation													
<i>Modification Item 1 of 1: ST002 - Canned Lube Oil Pump</i>													
<i>Subtotal: Installation</i>	<i>- / 8.059</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 8.059</i>	
Total													
Total Cost (Procurement + Support + Installation)	15.754	-	-	0.789	-	0.789	-	-	-	-	-	16.543	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 6 / ST002 - Canned Lube Oil Pump

Modification Item 1 of 1: ST002 - Canned Lube Oil Pump

Manufacturer Information

Manufacturer Name: IMO Pumps	Manufacturer Location: Monroe, NC
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 10

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates			Jan 2017				
Delivery Dates			Dec 2017				

Installation Information

Method of Implementation: SHIPYARD/AIT:: Installation Name: FMP Ship Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	11 / 8.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	11 / 8.059
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 8.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 8.059

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	9	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Method of Implementation (Organic): End Item Spares **Installation Quantity:** 1

Footnotes:
⁽⁶⁾ Total requirement is 11. Congressional Add Funds procured 5 and installed 3 in PY.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy	Date: February 2016
--	----------------------------

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 7 / ST002 - Tech Refresh
--	--	---

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	1.977	-	-	-	-	-	-	-	-	-	-	1.977
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	1.977	-	-	-	-	-	-	-	-	-	-	1.977
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	1.977	-	-	-	-	-	-	-	-	-	-	1.977
<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>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Upgrades to internal computer hardware and software on the Mid-Life Installed control systems for the Propulsion Load Management Unit (PLMU), Steering Control System and RO & Generators on the earlier installations of these systems in accordance with standard Navy Computer Control System Tech Refresh requirements.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy										Date: February 2016			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16					P-1 Line Item Number / Title: 1610 / LSD Midlife					Modification Number / Title: 7 / ST002 - Tech Refresh			
Models of Systems Affected: Tech Refresh				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total	
	<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>	
Procurement													
<i>Modification Item 1 of 1:</i> ST002 - Tech Refresh													
B Kits													
Recurring													
1.1.1) Tech Refresh - NonOrganic	4 / 1.467	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.467	
<i>Subtotal: Recurring</i>	- / 1.467	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.467	
<i>Subtotal: ST002 - Tech Refresh</i>	4 / 1.467	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.467	
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.467	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.467	
Installation													
<i>Modification Item 1 of 1:</i> ST002 - Tech Refresh	- / 0.510	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.510	
<i>Subtotal: Installation</i>	- / 0.510	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.510	
Total													
Total Cost (Procurement + Support + Installation)	1.977	-	-	-	-	-	-	-	-	-	-	1.977	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 7 / ST002 - Tech Refresh

Modification Item 1 of 1: ST002 - Tech Refresh

Manufacturer Information

Manufacturer Name: Various				Manufacturer Location: Various			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 3			
Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: Tech Refresh

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	4 / 0.510	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	4 / 0.510
FY 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 0.510	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.510

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Out	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16				P-1 Line Item Number / Title: 1610 / LSD Midlife				Modification Number / Title: 8 / ST002 - Generators & Elect Distribution				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	1.924	5.510	-	5.510	17.024	-	-	-	-	24.458
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	1.924	5.510	-	5.510	17.024	-	-	-	-	24.458
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	1.924	5.510	-	5.510	17.024	-	-	-	-	24.458
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This SHIPALT replaces the generator on the Ship Service Diesel Generators (SSDG) with a higher wattage version and increased electric distribution capability for shore power, switchboard and load centers. This SHIPALT provides significant Return on Investment (ROI) through improved reliability and maintainability of electrical ship systems/equipment versus the obsolete and maintenance intensive equipment. Also, additional electrical plant loads will improve efficient operation of the currently under-loaded SSDGs and contribute to the ROI through reduced maintenance costs for the SSDGs.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 8 / ST002 - Generators & Elect Distribution

Models of Systems Affected: Generators & Elect Distribution	Modification Type: TBD	Related RDT&E PEs:
--	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)

Procurement

Modification Item 1 of 1: ST002 - Generators & Elect Distribution												
B Kits												
Recurring												
1.1.1) FMP Ship Units - NonOrganic ⁽⁷⁾	- / -	- / -	1 / 1.738	- / 2.576	- / -	- / 2.576	- / 0.649	- / -	- / -	- / -	- / -	1 / 4.963
Subtotal: Recurring	- / 0.000	- / -	- / 1.738	- / 2.576	- / -	- / 2.576	- / 0.649	- / -	- / -	- / -	- / -	- / 4.963
Subtotal: ST002 - Generators & Elect Distribution	- / -	- / -	1 / 1.738	- / 2.576	- / -	- / 2.576	- / 0.649	- / -	- / -	- / -	- / -	1 / 4.963
Subtotal: Procurement, All Modification Items	- / 0.000	- / -	- / 1.738	- / 2.576	- / -	- / 2.576	- / 0.649	- / -	- / -	- / -	- / -	- / 4.963

Installation

Modification Item 1 of 1: ST002 - Generators & Elect Distribution	- / 0.000	- / -	- / 0.186	- / 2.934	- / -	- / 2.934	- / 16.375	- / -	- / -	- / -	- / -	- / 19.495
Subtotal: Installation	- / 0.000	- / -	- / 0.186	- / 2.934	- / -	- / 2.934	- / 16.375	- / -	- / -	- / -	- / -	- / 19.495

Total

Total Cost (Procurement + Support + Installation)	0.000	-	1.924	5.510	-	5.510	17.024	-	-	-	-	24.458
--	--------------	----------	--------------	--------------	----------	--------------	---------------	----------	----------	----------	----------	---------------

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 8 / ST002 - Generators & Elect Distribution

Modification Item 1 of 1: ST002 - Generators & Elect Distribution

Manufacturer Information

Manufacturer Name: Awua-Chem	Manufacturer Location: Knoxville, TN
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 21

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates		Mar 2016	Jan 2017				
Delivery Dates		Dec 2017	Dec 2017				

Installation Information

Method of Implementation: SHIPYARD/AIT:: Installation Name: FMP Ship Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / 0.186	- / 2.934	- / -	- / 2.934	1 / 16.375	- / -	- / -	- / -	- / -	1 / 19.495
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / 0.186	- / 2.934	- / -	- / 2.934	1 / 16.375	- / -	- / -	- / -	- / -	1 / 19.495

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	

Footnotes:

(7) The replacement generator to be installed in FY18 for LSD-46 is procured in components and is budgeted in FY16, FY17, and FY18 based on the production lead-times of individual components. FY16 funding is required to procure generator couplings, load centers, shore power receptacles, and shore power switchboard with lead-times ranging from 11 to 21 months. IN/OUT based on current phased mod availability. FY17 DSA is for the year prior to install costs associated with the remainder of Midlife Long Lead Time Material and Advanced Planning. IN/OUT based on current phased mod availability.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy							Date: February 2016					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16				P-1 Line Item Number / Title: 1610 / LSD Midlife				Modification Number / Title: 10 / ST002 - Generator LO Supply System				

Resource Summary	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	0.155	0.791	-	-	0.946
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	0.155	0.791	-	-	0.946
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	-	-	-	-	-	-	0.155	0.791	-	-	0.946
<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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This ship change replaces the existing lube oil supply system with a new lube oil supply system in which the diesel engine is bypassed by using a supply tap point off the existing diesel supply inlet. This will then supply filtered, conditioned oil to the generator bearings. Post Mid-Life LSD-41/49 class have been experiencing generator bearing failures due to debris being introduced by the engine.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 10 / ST002 - Generator LO Supply System

Models of Systems Affected: [No Model Specified]	Modification Type: TBD	Related RDT&E PEs:
---	-------------------------------	-------------------------------

Financial Plan	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> ST002 - Generator LO Supply System												
B Kits												
Recurring												
1.1.1) FMP Ship Units - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.155	- / -	- / -	- / -	1 / 0.155
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.155	- / -	- / -	- / -	- / 0.155
<i>Subtotal: ST002 - Generator LO Supply System</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.155	- / -	- / -	- / -	1 / 0.155
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.155	- / -	- / -	- / -	- / 0.155
Installation												
<i>Modification Item 1 of 1:</i> ST002 - Generator LO Supply System	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.791	- / -	- / -	- / 0.791
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.791	- / -	- / -	- / 0.791
Total												
Total Cost (Procurement + Support + Installation)	0.000	-	-	-	-	-	-	0.155	0.791	-	-	0.946

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2017 Navy		Date: February 2016
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 01 / 16	P-1 Line Item Number / Title: 1610 / LSD Midlife	Modification Number / Title: 10 / ST002 - Generator LO Supply System

Modification Item 1 of 1: ST002 - Generator LO Supply System

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 9

Dates	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Contract Dates					Feb 2019		
Delivery Dates					Nov 2019		

Installation Information

Method of Implementation: [none specified]:: Installation Name: FMP Ship Units

Installation Cost	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 2015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.791	- / -	- / -	1 / 0.791
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.791	- / -	- / -	1 / 0.791

Installation Schedule

	PYS	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1

UNCLASSIFIED

THIS PAGE INTENTIONALLY LEFT BLANK

UNCLASSIFIED